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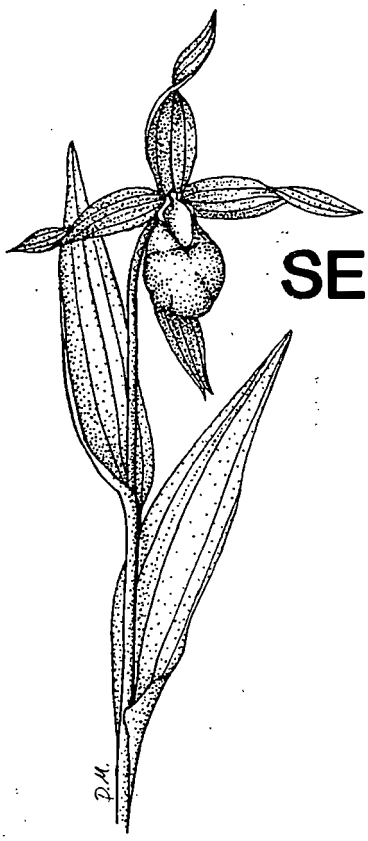

SENSITIVE PLANT FIELD GUIDE

R-1

NORTHERN REGION

USDA Forest Service

MONTANA

SENSITIVE PLANT FIELD GUIDE

Introduction

The Northern Region initiated a program for the identification and management of Threatened, Endangered, and Sensitive Plant Species during the past year. In March, 1988 the Regional Forester issued a Sensitive Plant Species List for the Northern Region. As part of this program, a field guide has been prepared to assist Forest personnel in the identification of Sensitive Plant Species.

Two lists provide the framework for the Northern Region Sensitive Plant Program, the Sensitive Plant Species List and the Watch Plant Species List. The following definitions for 'Sensitive' and 'Watch' are being used.

SENSITIVE PLANT SPECIES - a plant species, or recognized subspecies or variety, for which the Regional Forester has determined there is a concern for population viability, within a state, as evidenced by significant current or predicted downward trend in populations or habitat. All sensitive plant species are known to occur on National Forest land. This may include federal candidates (C1, C2, 3C) and plant species proposed for listing as threatened and endangered species on the Federal Register.

WATCH PLANT SPECIES - a plant species, or recognized subspecies or variety, that: (1) is not known to occur on National Forest land, but is predicted to occur on the basis of suitable habitat, and for which there is concern for population viability, within a state, as evidenced by significant current or predicted downward trend in populations or habitat. These taxa, if found on National Forest land would be designated sensitive plant species. This may include federal candidates (C1, C2, 3C). OR (2) is known to occur on Forest Service land, but has no immediate or predicted threats to population viability. These taxa are important to monitor in the overall biological diversity program because of limited distribution or federal status. Included in this category could be taxa endemic to a given state, or federal candidate species for which we now have evidence that populations are more widespread than previously thought and are considered secure.

These two lists are to be considered dynamic lists that will be updated annually based on new information acquired during each field season. In conducting project evaluations, species on both lists need to be considered. In order to coordinate with individual state Natural Heritage Programs both lists have been arranged on a state by state basis. In addition, the two lists have been separated into Sensitive and Watch lists for each National Forest. A list of plants by general habitat has also been prepared for each National Forest.

This field guide contains descriptions for taxa on the Sensitive Plant List only. Descriptions for Watch List taxa will be prepared in early 1989, and will be available for inclusion in these guides prior to the field season. This guide contains a summary of distribution and status, description of habitat, and a non-technical description for each sensitive plant species. For

technical descriptions of these taxa refer to Vascular Plants of the Pacific Northwest (Hitchcock et al. 1969), or the references cited in the text.

The major purpose of this guide is to provide the framework necessary to increase our knowledge of Threatened, Endangered, and Sensitive Plant taxa in the Northern Region. Please work closely with the Botany Coordinator on your forest in documenting known occurrences of these plant species, and in improving the content of this field guide. It is also important to have the identification of these sensitive plant species verified by a trained botanist. Many of these species are difficult to identify and proper identification is crucial. The Regional Botanist will provide assistance with verification.

The Region is working closely with the Natural Heritage Programs in maintaining a data base documenting occurrences of Sensitive Plant Species. It is important that local information be incorporated into the regional data base. This will greatly enhance our ability to manage for these taxa across the landscape. Sensitive Plant survey forms may be obtained from the Forest Botany Coordinator or the Botanist in the Regional Office. Regional Botanist/Diversity Ecologist, Angela Evenden, is available to help in developing National Forest botany programs. She may be reached at FTS 585-3141, (406) 329-3141, or DG to A.Evenden:R01A.

ACKNOWLEDGEMENTS

This field guide to Sensitive Plants in the Northern Region is the result of contributions from many individuals and from the Montana Natural Heritage Program. The text portion of the guide was written by Peter Lesica and Steve Shelly. Maps and distribution information were provided by the Heritage Program. Special thanks also go to the following people who assisted with editing and production of the field guide; John Pierce, Cindy Martin, Suzanne Reed, Sue Reel, Edna Sampson (and helpers), Bob Keane, and Sara Lustgraaf. Photographs were graciously provided by several individuals acknowledged below. Permission to use illustrations was granted from a variety of sources which are also acknowledged below.

-- Angela Evenden
Botanist/Diversity Ecologist

MONTANA SENSITIVE PLANT ILLUSTRATION CREDITS

Permission was obtained to use illustrations from the following sources.

Drosera linearis Goldie
Potamogeton obtusifolius Mert. & Koch
Viola renifolia Gray
The above illustrations have been reprinted by permission from New Britton & Brown Illustrated Flora, Volumes 1-3, H.A. Gleason, 1963, The New York Botanical Garden.

Astragalus barrii Barneby
Lesquerella humilis Rollins
Cover Illustration
Debbie McNiel, Troy, MT

Saxifraga tempestiva Elvander & Denton
Madrono (Vol. 23:346). California Botanical Society, California Academy of Sciences. San Fransisco.

Antennaria pulcherrima(Hook.) Greene
Hulten. Flora of Alaska and Neighboring Territories. 1968. Standford University Press.

Kobresia macrocarpa Clokey ex Mack.
North American Flora 2, pl. 535. New York Botanical Garden.

Shoshonea pulvinata Evert & Constance
Evert, D.F. and L. Constance. 1982. Shoshonea pulvinata, a new genus and species of Umbelliferae from Wyoming. Systematic Botany 7(4):472.

ALL OTHER ILLUSTRATIONS ARE USED WITH PERMISSION FROM:
Hitchcock, C.L., A. Cronquist, M. Ownby, and J.W. Thompson. 1969. Vascular Plants of the Pacific Northwest. Volumes 1-5. University of Washington Press, Seattle, WA.

MONTANA SENSITIVE PLANT PHOTO CREDITS

Maria Ash
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Saussurea densa (Hook.) Rydb.

Don Dodge
Saussurea weberi Hulten

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Jan Nixon
Claytonia lanceolata Pursh var. *flava* (Nels.) Hitchc.

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Cypripedium passerinum Richards.
Orchis rotundifolia Banks ex Pursh

Steve Shelly, MT Natural Heritage Program
Astragalus barrii Barneby
Cypripedium calceolus L. var. *parviflorum* (Salisb.) Fern.
Epipactis gigantea Dougl.
Geocaulon lividum (Richards.) Fern.
Grindelia howellii Steyermark
Howellia aquatilis Gray
Lesquerella humilis Rollins
Penstemon lemhiensis (Keck) Keck and Cronq.
Shoshonea pulvinata Evert & Constance

Steve Wirt
Epipactis gigantea Dougl.

The Nature Conservancy
Lesquerella carinata Rollins

DEFINITIONS FOR PLANT RANKINGS

STATE RANK (Used by Natural Heritage Program)

S1 Critically imperiled in the state because of extreme rarity (5 or fewer occurrences, or very few remaining individuals), or because of some factor of its biology making it especially vulnerable to extirpation from the state. (Critically endangered in state).

S2 Imperiled in the state because of rarity (6 to 20 occurrences), or because of other factors demonstrably making it very vulnerable to extirpation from the state. (Endangered in state).

S3 Rare in the state (on the order of 20+ occurrences). (Threatened in state).

SU Possibly in peril in the state, but status uncertain; more information needed.

SH Historically known in the state; may be rediscovered.

SX Apparently extirpated from Montana.

GLOBAL RANK (Used by Natural Heritage Program)

G1 Critically imperiled globally because of extreme rarity (5 or fewer occurrences, or very few remaining individuals), or because of some factor of its biology making it especially vulnerable to extinction. (Critically endangered throughout range).

G2 Imperiled globally because of rarity (6 to 20 occurrences) or because of other factors demonstrably making it very vulnerable to extinction throughout its range. (Endangered throughout range).

G3 Either very rare and local throughout its range or found locally (even abundant at some of its locations) in a restricted range, or because of other factors making it vulnerable to extinction throughout its range; in the range of 21 to 100 occurrences. (Threatened throughout range).

G4 Apparently secure globally, though it may be quite rare in parts of its range, especially at the periphery.

G5 Demonstrably secure globally, though it may be quite rare in parts of its range, especially at the periphery.

GU Possibly in peril range-wide, but status uncertain; more information needed.

GH Historically known; may be rediscovered.

GX Believed to be extinct throughout range; historical records only, continue search.

FEDERAL STATUS

The following definitions are from the U.S. Fish and Wildlife Service Notices of Review (1985).

E	Endangered (none in Region 1)
T	Threatened (none in Region 1)
P	Proposed E or T (one in Region 1)
C1	Notice of Review, Category 1 (substantial biological information on file to support the appropriateness of proposing to list as endangered or threatened).
C2	Notice of Review, Category 2 (current information indicates that proposing to list as endangered or threatened is possibly appropriate, but substantial biological information is not on file to support an immediate ruling).
C2*	Category 2, and the taxon is possibly extinct.
3A	Taxa for which the USFWS has persuasive evidence of extinction.
3B	Names that, on the basis of current taxonomic understanding, do not represent taxa meeting the Endangered Species Act's definition of 'species.'
3C	Taxa that have proven to be more abundant or widespread than was previously believed, and/or those that are not subject to any identifiable threat.

----- SENSITIVE PLANT SPECIES LIST -----

STATE: MONTANA

Scientific name	Common name	Federal Status	National Forest Presence									
			BH	BT	CU	DL	FL	GA	HE	KO	LC	LO
Allium fibrillum	Fringed Onion						?			Y		?
Antennaria pulcherrima	Showy Pussytoes		?			?					Y	
Astragalus barrii	Barr's Milkvetch	C2			Y							
Astragalus molybdenus	Leadville Milkvetch						?		?		Y	
Athysanus pusillus	Sandweed			Y								?
Botrychium paradoxum	Peculiar Moonwort	C2	?			Y	?		?		Y	?
Calamagrostis tweedyi	Cascade Reedgrass	C2								?		Y
Carex idahoa	Idaho Sedge	3C	Y			Y						?
Carex livida	Pale Sedge						?		Y		?	
Carex paupercula	Poor Sedge						?		?		?	Y
Castilleja covilleana	Rocky Mountain Paintbrush		?	Y								
Ceanothus herbaceus	New Jersey Tea				Y							
Chrysosplenium tetrandrum	Northern Golden-carpet			Y			?			?		?
Cirsium subniveum	Jackson's Hole Thistle		Y					?				
Clarkia rhomboidea	Common Clarkia			?						?		Y
Claytonia lanceolata var. flava	Yellow Springbeauty	C2	?			Y		Y				
Cypripedium calceolus var. parviflorum	Small Yellow Lady's-slipper			Y			Y			Y	Y	?
Cypripedium passerinum	Sparrow's-egg Lady's-slipper						Y		?	?	Y	?
Drosera linearis	Linear-leaved Sundew						?		Y		?	
Epipactis gigantea	Giant Helleborine		?	?	?	?	Y	?	?	?	?	?
Erigeron asperugineus	Rough Fleabane		Y	?								
Erigeron evermannii	Evermann's Fleabane		?	Y								
Erigeron flagellaris	Trailing Fleabane		?			?			?		Y	
Eupatorium occidentale	Western Boneset		?	Y						?		Y
Geocaulon lividum	Northern Bastard Toad-flax						Y			Y		?
Grindelia howellii	Howell's Gumweed	C2					?			?		Y
Haplopappus macronema var. macronema	Discoid Goldenweed		Y	?		?		?				
Howellia aquatilis	Water Howellia	C2					Y			?		?
Kobresia macrocarpa	Large-fruited Kobresia				Y			?				
Lesquerella carinata	Keeled Bladderpod	3C	?			Y						?
Lesquerella humilis	Few-seeded Bladderpod			Y								
Lomatium geyeri	Geyer's Biscuit-root						?			Y		
Mertensia bella	Oregon Bluebell			?								Y
Mimulus primuloides	Primrose Monkey-flower		Y	Y		?						
Orchis rotundifolia	Round-leaved Orchis						Y		?	?	Y	?
Oxytropis columbiana	Columbia River Crazy Weed						Y			?		
Oxytropis podocarpa	Stalked-pod Crazyweed		?			?	?		?		Y	
Penstemon attenuatus var. militaris	Taper-leaved Beard Tongue		?	Y								
Penstemon lemhiensis	Lemhi Penstemon	C2	Y	?		?						
Potamogeton obtusifolius	Blunt-leaved Pondweed						Y				?	?
Ranunculus jovis	Jove's Buttercup		?			?		Y				
Salix barrattiana	Barratt Willow				Y		?	?			?	
Salix wolfii var. wolfii	Wolf's Willow		Y	?	?	Y		?				
Satureja douglasii	Yerba Buena			Y						?		Y
Saussurea densa	Dwarf Saw-wort						?				Y	
Saussurea weberi	Weber's Saw-wort	3C	Y			Y						
Saxifraga tempestiva	Storm Saxifrage		Y	Y		Y						
Selaginella watsonii	Watson's Selaginella		Y	?		?						
Shoshonea pulvinata	Shoshonea	C2			Y							
Thalictrum alpinum	Alpine Meadowrue		Y			?		?	?		?	
Viola renifolia	Kidney-leaved Violet						Y			?	?	?

National Forest Presence indicates which species are KNOWN to occur on a given National Forest (Y = yes), and which species are SUSPECTED to occur on the National Forest (? = suspected).

----- WATCH PLANT SPECIES LIST -----

STATE: MONTANA

Scientific name	Common name	Federal Status	National Forest Presence									
			BH	BT	CU	DL	FL	GA	HE	KO	LC	LO
Agoseris lackschewitzii	Pink Agoseris		Y		?	Y		Y	?		Y	
Aquilegia brevistyla	Short-styled columbine										?	
Arabis fecunda	Sapphire Rockcress	C2		?		?						?
Arenaria kingii	King's Sandwort		Y	?		?						
Asplenium trichomanes	Maidenhair Spleenwort		?			?	?		?	?	?	
Astragalus leptaleus	Park Milkvetch		?			?	?	?	?		?	?
Balsamorhiza macrophylla	Large-leaved Balsamroot		?					?				
Botrychium crenulatum	Wavy Moonwort	C2					?			?		?
Botrychium minganense	Mingan Island Moonwort	-					Y			?	?	?
Cardamine rupicola	Cliff Toothwort	3C					Y		?		Y	?
Carex lenticularis var. dolia	Goose-grass Sedge	C2					?					
Carex multicostata	Many-ribbed Sedge		?			?		?				
Carex occidentalis	Western Sedge		Y	?		?		?				
Castilleja gracillima	Slender Paintbrush		?					?				
Castilleja longispica	White Paintbrush		?	?		?		?				
Cirsium longistylum	Long-styled Thistle								?		Y	
Cypripedium fasciculatum	Clustered Lady's-slipper	3C					?			?		?
Delphinium andersonii	Anderson's Larkspur		?			?		?				
Erigeron eatonii var. eatonii	Eaton's Daisy		?		?			?				
Erigeron lackschewitzii	Front Mountain Erigeron						Y		?		Y	
Erigeron linearis	Desert Yellow Daisy		?	Y								
Eriophorum viridicarinatum	Green-keeled Cottonsedge		Y			?	?		?	?	?	?
Gentianopsis simplex	Hiker's Gentian		?	?								?
Juncus hallii	Hall's Rush		Y		?	?		Y	Y			
Kobresia simpliciuscula	Simple Kobresia				?		?				?	
Lesquerella klausii	Divide Bladderpod								Y		Y	
Ligusticum filicinum	Fern-leaf Lovage		Y					?				
Ligusticum porteri	Porter's Lovage				?			?				
Mentzelia montana	Mountain Blazing Star				?			?				
Mentzelia nuda	Bractless Mentzelia				?							
Orobanche corymbosa	Flat-topped Broomrape		?	?		?						
Orogenia linearifolia	Great Basin Orogenia		?	Y								Y
Pedicularis contorta var. ctenophora	Coil-beaked Lousewort		Y	?		?						
Phlox kelseyi var. missoulensis	Missoula Phlox	3C				?			Y		Y	?
Polygonum douglasii var. austinae	Austin's Knotweed					?			Y		Y	
Polystichum kruckebergii	Kruckeberg's Sword-fern	3C	?			Y	?				?	?
Rorippa calycina	Persistent Yellowcress	C2			?						?	
Scirpus cyperinus	Wool Grass									?		?
Scirpus subterminalis	Water Bulrush						Y		Y	Y	?	?
Silene spaldingii	Spalding's Catchfly	C2					?			?		?
Synthyris canbyi	Canby's Synthyris	3C					Y					Y
Thlaspi parviflorum	Small-flowered Pennycress		?		?	?		?				
Trifolium eriocephalum var. piperi	Woolly-head Clover		?	Y								?
Trifolium gymnocarpon	Hollyleaf Clover		?	Y								?
Trisetum orthochaetum	Bitterroot Trisetum	C2		?								Y
Zizia aurea	Golden Alexanders						?			?		

National Forest Presence indicates which species are KNOWN to occur on a given National Forest (Y = yes), and which species are SUSPECTED to occur on the National Forest (? = suspected).

7/88

BEAVERHEAD NATIONAL FOREST

Sensitive Plant Species

Scientific name	Common name	Fed. Status
Known to occur on the Forest:		
Carex idahoa	Idaho Sedge	3C
Cirsium subniveum	Jackson's Hole Thistle	
Erigeron asperugineus	Rough Fleabane	
Haplopappus macronema var. macronema	Discoid Goldenweed	
Mimulus primuloides	Primrose Monkey-flower	
Penstemon lemhiensis	Lemhi Penstemon	C2
Salix wolfii var. wolfii	Wolf's Willow	
Saussurea weberi	Weber's Saw-wort	3C
Saxifraga tempestiva	Storm Saxifrage	
Selaginella watsonii	Watson's Selaginella	
Thalictrum alpinum	Alpine Meadowrue	
Suspected to occur on the Forest:		
Antennaria pulcherrima	Showy Pussytoes	
Botrychium paradoxum	Peculiar Moonwort	C2
Castilleja covilleana	Rocky Mountain Paintbrush	
Claytonia lanceolata var. flava	Yellow Springbeauty	C2
Epipactis gigantea	Giant Helleborine	
Erigeron evermannii	Evermann's Fleabane	
Erigeron flagellaris	Trailing Fleabane	
Eupatorium occidentale	Western Boneset	
Lesquerella carinata	Keeled Bladderpod	3C
Oxytropis podocarpa	Stalked-pod Crazyweed	
Penstemon attenuatus var. militaris	Taper-leaved Beard Tongue	
Ranunculus jovis	Jove's Buttercup	

7/88

BEAVERHEAD NATIONAL FOREST

Watch Plant Species

Scientific name	Common name	Fed. Status
Known to occur on the Forest:		
Agoseris lackschewitzii	**Pink Agoseris**	
Arenaria kingii	**King's Sandwort**	
Carex occidentalis	**Western Sedge**	
Eriophorum viridicarinatum	**Green-keeled Cottonsedge**	
Juncus hallii	**Hall's Rush**	
Ligusticum filicinum	**Fern-leaf Lovage**	
Pedicularis contorta var. ctenophora	**Coil-beaked Lousewort**	
Suspected to occur on the Forest:		
Asplenium trichomanes	**Maidenhair Spleenwort**	
Astragalus leptaleus	**Park Milkvetch**	
Balsamorhiza macrophylla	**Large-leaved Balsamroot**	
Carex multicostata	**Many-ribbed Sedge**	
Castilleja gracillima	**Slender Paintbrush**	
Castilleja longispica	**White Paintbrush**	
Delphinium andersonii	**Anderson's Larkspur**	
Erigeron eatonii var. eatonii	**Eaton's Daisy**	
Erigeron linearis	**Desert Yellow Daisy**	
Gentianopsis simplex	**Hiker's Gentian**	
Orobanche corymbosa	**Flat-topped Broomrape**	
Orogenia linearifolia	**Great Basin Orogenia**	
Polystichum kruckebergii	**Kruckeberg's Sword-fern**	3C
Thlaspi parviflorum	**Small-flowered Pennycress**	
Trifolium eriocephalum var. piperi	**Woolly-head Clover**	
Trifolium gymnocarpon	**Hollyleaf Clover**	

7/88

BEAVERHEAD NATIONAL FOREST

Sensitive Plants by Habitat

Open Forests

Haplopappus macronema var. macronema
Penstemon attenuatus var. militaris ?
Ranunculus jovis ?

Upper Timberlines

Erigeron asperugineus
Penstemon attenuatus var. militaris ?
Saxifraga tempestiva

Alpine Areas

Erigeron asperugineus
Erigeron evermannii ?
Haplopappus macronema var. macronema
Lesquerella carinata ?
Oxytropis podocarpa ?
Saussurea weberi
Saxifraga tempestiva
Selaginella watsonii

Meadows

Botrychium paradoxum ?
Carex idahoa
Cirsium subniveum
Claytonia lanceolata var. flava ?
Erigeron flagellaris ?
Penstemon attenuatus var. militaris ?
Saussurea weberi

Seeps & Springs

Epipactis gigantea ?

Grasslands

Claytonia lanceolata var. flava ?
Lesquerella carinata ?
Penstemon attenuatus var. militaris ?
Penstemon lemhiensis

Sagebrush Grasslands

Cirsium subniveum
Claytonia lanceolata var. flava ?
Penstemon lemhiensis
Ranunculus jovis ?

Rocky Areas

Castilleja covilleana ?
Eupatorium occidentale ?
Haplopappus macronema var. macronema
Selaginella watsonii

Bogs & Fens

Antennaria pulcherrima ?
Carex idahoa
Mimulus primuloides
Salix wolfii var. wolfii
Thalictrum alpinum

Stream Banks & Lake Margins

Epipactis gigantea ?
Salix wolfii var. wolfii

? = Sensitive plant species on the Regional Foresters List suspected to occur on the Beaverhead National Forest.
(All others on list are known to occur on the Forest)

BEAVERHEAD NATIONAL FOREST

Watch Plants by Habitat

Open Forests

Carex multicostata ?
Delphinium andersonii ?
Ligusticum filicinum
Pedicularis contorta var. ctenophora
Trifolium eriocephalum var. piperi
Trifolium gymnocarpon ?

Upper Timberline

Arenaria kingii
Carex occidentalis
Juncus hallii
Pedicularis contorta var. ctenophora

Alpine Areas

Arenaria kingii
Carex occidentalis

Meadows

Agoseris lackschewitzii
Astragalus leptaleus ?
Balsamorhiza macrophylla ?
Carex multicostata ?
Castilleja gracillima ?
Castilleja longispica ?
Erigeron eatonii var. eatonii ?
Gentianopsis simplex ?
Juncus hallii
Ligusticum filicinum
Orogenia linearifolia ?
Pedicularis contorta var. ctenophora
Thlaspi parviflorum ?
Trifolium eriocephalum var. piperi

Open Rocky Areas

Arabis fecunda
Arenaria kingii
Erigeron linearis ?

Moist Rocky Areas

Asplenium trichomanes ?
Polystichum kruckebergii ?

Cliff Crevices

Asplenium trichomanes ?
Polystichum kruckebergii ?
Thlaspi parviflorum ?
Trifolium gymnocarpon ?

Alkaline Areas

Astragalus leptaleus ?

Calcareous Areas

Arabis fecunda
Thlaspi parviflorum ?

Bogs & Fens

Gentianopsis simplex ?

Seeps & Springs

Agoseris lackschewitzii
Carex multicostata ?
Gentianopsis simplex ?

BEAVERHEAD NATIONAL FOREST

Watch Plants by Habitat

Grasslands

Balsamorhiza macrophylla ?
Carex occidentalis
Castilleja longispica ?
Erigeron eatonii var. eatonii ?
Orobanche corymbosa ?
Orogenia linearifolia ?
Pedicularis contorta var. ctenophora
Trifolium eriocephalum var. piperi
Trifolium gymnocarpon ?

Stream Banks & Lake Margins

Carex multicostata ?
Castilleja gracillima ?
Gentianopsis simplex ?

Sagebrush Grasslands

Carex occidentalis
Castilleja longispica ?
Delphinium andersonii ?
Erigeron linearis ?
Orobanche corymbosa ?
Trifolium gymnocarpon ?

? = Watch plant species on the Regional Foresters List suspected to occur on Beaverhead National Forest.
(all others on list are known to occur on the Forest)

BITTERROOT NATIONAL FOREST

Sensitive Plant Species

Scientific name	Common name	Fed. Status
Known to occur on the Forest:		
Athysanus pusillus	Sandweed	
Castilleja covilleana	Rocky Mountain Paintbrush	
Chrysosplenium tetrandrum	Northern Golden-carpet	
Cypripedium calceolus var. parviflorum	Small Yellow Lady's-slipper	
Erigeron evermannii	Evermann's Fleabane	
Eupatorium occidentale	Western Boneset	
Lesquerella humilis	Few-seeded Bladderpod	
Mimulus primuloides	Primrose Monkey-flower	
Penstemon attenuatus var. militaris	Taper-leaved Beard Tongue	
Satureja douglasii	Yerba Buena	
Saxifraga tempestiva	Storm Saxifrage	
Suspected to occur on the Forest:		
Clarkia rhomboidea	Common Clarkia	
Epipactis gigantea	Giant Helleborine	
Erigeron asperugineus	Rough Fleabane	
Haplopappus macronema var. macronema	Discoid Goldenweed	
Mertensia bella	Oregon Bluebell	
Penstemon lemhiensis	Lemhi Penstemon	C2
Salix wolfii var. wolfii	Wolf's Willow	
Selaginella watsonii	Watson's Selaginella	

BITTERROOT NATIONAL FOREST

Sensitive Plant Species

Scientific name	Common name	Fed. Status
Known to occur on the Forest:		
Athysanus pusillus	Sandweed	
Castilleja covilleana	Rocky Mountain Paintbrush	
Chrysosplenium tetrandrum	Northern Golden-carpet	
Cypripedium calceolus var. parviflorum	Small Yellow Lady's-slipper	
Erigeron evermannii	Evermann's Fleabane	
Eupatorium occidentale	Western Boneset	
Lesquerella humilis	Few-seeded Bladderpod	
Mimulus primuloides	Primrose Monkey-flower	
Penstemon attenuatus var. militaris	Taper-leaved Beard Tongue	
Satureja douglasii	Yerba Buena	
Saxifraga tempestiva	Storm Saxifrage	
Suspected to occur on the Forest:		
Clarkia rhomboidea	Common Clarkia	
Epipactis gigantea	Giant Helleborine	
Erigeron asperugineus	Rough Fleabane	
Haplopappus macronema var. macronema	Discoid Goldenweed	
Mertensia bella	Oregon Bluebell	
Penstemon lemhiensis	Lemhi Penstemon	C2
Salix wolfii var. wolfii	Wolf's Willow	
Selaginella watsonii	Watson's Selaginella	

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BITTERROOT NATIONAL FOREST

Sensitive Plants by Habitat

Moist Forests

Cypripedium calceolus v. parviflorum
Mertensia bella ?
Satureja douglasii

Dry Forests

Clarkia rhomboidea ?

Subalpine Forests

Lesquerella humilis
Mertensia bella ?
Penstemon attenuatus var. militaris

Upper Timberline Areas

Erigeron asperugineus ?
Haplopappus macronema var. macronema ?
Lesquerella humilis
Saxifraga tempestiva

Alpine Areas

Erigeron asperugineus ?
Erigeron evermannii
Haplopappus macronema var. macronema ?
Lesquerella humilis
Saxifraga tempestiva
Selaginella watsonii ?

Seeps & Springs

Chrysosplenium tetrandrum
Epipactis gigantea ?

Grasslands

Penstemon attenuatus var. militaris
Penstemon lemhiensis ?

Meadows

Cypripedium calceolus v. parviflorum
Penstemon attenuatus var. militaris

Rocky Areas

Athysanus pusillus
Castilleja covilleana
Chrysosplenium tetrandrum
Eupatorium occidentale
Haplopappus macronema var. macronema ?
Lesquerella humilis
Selaginella watsonii ?

Bogs & Fens

Cypripedium calceolus v. parviflorum
Mimulus primuloides
Salix wolfii var. wolfii ?

Stream Banks & Lake Margins

Athysanus pusillus
Epipactis gigantea ?
Salix wolfii var. wolfii ?

? = Sensitive plant species on the Regional Foresters List suspected to occur on the Bitterroot National Forest.
(All others on list are known to occur on the Forest)

BITTERROOT NATIONAL FOREST

Watch Plants by Habitat

Open Forests

Pedicularis contorta var. ctenophora ?
Trifolium eriocephalum var. piperi
Trifolium gymnocarpon

Upper Timberline

Arenaria kingii ?
Carex occidentalis ?
Pedicularis contorta var. ctenophora ?

Alpine Areas

Arenaria kingii ?
Carex occidentalis ?

Meadows

Castilleja longispica ?
Erigeron eatonii var. eatonii ?
Gentianopsis simplex ?
Orogenia linearifolia
Pedicularis contorta var. ctenophora ?
Trifolium eriocephalum var. piperi
Trisetum orthochaetum ?

Grasslands

Carex occidentalis ?
Erigeron eatonii var. eatonii
Orobanche corymbosa ?
Orogenia linearifolia
Pedicularis contorta var. ctenophora ?
Trifolium eriocephalum var. piperi
Trifolium gymnocarpon

Open Rocky Areas

Arabis fecunda ?
Arenaria kingii ?
Erigeron linearis

Calcareous Areas

Arabis fecunda ?

Seeps & Springs

Gentianopsis simplex ?

Stream Banks & Lake Margins

Gentianopsis simplex ?

Sagebrush Grasslands

Carex occidentalis
Castilleja longispica ?
Erigeron linearis
Orobanche corymbosa ?
Trifolium gymnocarpon

? = Watch plant species on the Regional Foresters List suspected to occur on Bitterroot National Forest.
(all others on list are known to occur on the Forest)

CUSTER (Montana) NATIONAL FOREST

Sensitive Plant Species

Scientific name	Common name	Fed. Status
Known to occur on the Forest:		
Astragalus barrii	**Barr's Milkvetch**	**C2**
Ceanothus herbaceus	**New Jersey Tea**	
Kobresia macrocarpa	**Large-fruited Kobresia**	
Salix barrattiana	**Barratt Willow**	
Shoshonea pulvinata	**Shoshonea**	**C2**
Suspected to occur on the Forest:		
Epipactis gigantea	**Giant Helleborine**	
Salix wolfii ver. wolfii	**Wolf's Willow**	

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CUSTER (Montana) NATIONAL FOREST

Watch Plant Species

Scientific name	Common name	Fed. Status
Known to occur on the Forest:		
Suspected to occur on the Forest:		
Agoseris lackschewitzii	Pink Agoseris	
Erigeron eatonii var. eatonii	Eaton's Daisy	
Juncus hallii	Hall's Rush	
Kobresia simpliciuscula	Simple Kobresia	
Ligusticum porteri	Porter's Lovage	
Mentzelia montana	Mountain Blazing Star	
Mentzelia nuda	Bractless Mentzelia	
Rorippa calycina	Persistent Yellowcress	C2
Thlaspi parviflorum	Small-flowered Pennycress	

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CUSTER (Montana) NATIONAL FOREST

Sensitive Plants by Habitat

Dry Forest Openings

Ceanothus herbaceus

Upper Timberlines

Salix barrattiana

Alpine Areas

Kobresia macrocarpa
Salix barrattiana

Seeps & Springs

Epipactis gigantea ?

Thin Soils of Barren Hills

Astragalus barrii

Limestone Outcrops

Shoshonea pulvinata

Bogs & Fens

Salix wolfii var. wolfii ?

Stream Banks & Lake Margins

Epipactis gigantea ?
Salix wolfii var. wolfii ?

? = Sensitive plant species on the Regional Foresters List suspected to occur on the Montana portion of the Custer National Forest.
(All others on list are known to occur on the Forest)

CUSTER NATIONAL FOREST

Watch Plants by Habitat

Forests

Ligusticum porteri ?

Upper Timberline

Juncus hallii ?

Alpine Areas

Kobresia simpliciuscula ?

Meadows

Agrostis lackschewitzii ?
Erigeron eatonii var. eatonii ?
Juncus hallii ?
Ligusticum porteri ?
Thlaspi parviflorum

Grasslands

Erigeron eatonii var. eatonii ?
Mentzelia montana ?

Open Rocky Areas

Mentzelia nuda ?

Cliff Crevices

Thlaspi parviflorum

Gypsum Substrates

Mentzelia nuda ?

Calcareous Areas

Thlaspi parviflorum

Seeps & Springs

Agoseris lackschewitzii ?

Stream Banks & Lake Margins

Rorippa calycina ?

? = Watch plant species on the Regional Foresters List suspected to occur on Custer National Forest.
(all others on list are known to occur on the Forest)

DEERLODGE NATIONAL FOREST

Sensitive Plant Species

Scientific name	Common name	Fed. Status
Known to occur on the Forest:		
Botrychium paradoxum	Peculiar Moonwort	C2
Carex idahoa	Idaho Sedge	3C
Claytonia lanceolata var. flava	Yellow Springbeauty	C2
Lesquerella carinata	Keeled Bladderpod	3C
Salix wolfii var. wolfii	Wolf's Willow	
Saussurea weberi	Weber's Saw-wort	3C
Saxifraga tempestiva	Storm Saxifrage	
Suspected to occur on the Forest:		
Antennaria pulcherrima	Showy Pussytoes	
Epipactis gigantea	Giant Helleborine	
Erigeron flagellaris	Trailing Fleabane	
Haplopappus macronema var. macronema	Discoid Goldenweed	
Mimulus primuloides	Primrose Monkey-flower	
Oxytropis podocarpa	Stalked-pod Crazyweed	
Penstemon lemhiensis	Lemhi Penstemon	C2
Ranunculus jovis	Jove's Buttercup	
Selaginella watsonii	Watson's Selaginella	
Thalictrum alpinum	Alpine Meadowrue	

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DEERLODGE NATIONAL FOREST

Watch Plant Species

Scientific name	Common name	Fed. Status
Known to occur on the Forest:		
Agoseris lackschewitzii	**Pink Agoseris**	
Polystichum kruckebergii	**Kruckeberg's Sword-fern**	**3C**
Suspected to occur on the Forest:		
Arabis fecunda	**Sapphire Rockcress**	**C2**
Arenaria kingii	**King's Sandwort**	
Asplenium trichomanes	**Maidenhair Spleenwort**	
Astragalus leptaleus	**Park Milkvetch**	
Carex multicostata	**Many-ribbed Sedge**	
Carex occidentalis	**Western Sedge**	
Castilleja longispica	**White Paintbrush**	
Delphinium andersonii	**Anderson's Larkspur**	
Eriophorum viridicarinatum	**Green-keeled Cottonsedge**	
Juncus hallii	**Hall's Rush**	
Orobanche corymbosa	**Flat-topped Broomrape**	
Pedicularis contorta var. ctenophora	**Coil-beaked Lousewort**	
Phlox kelseyi var. missoulensis	**Missoula Phlox**	**3C**
Polygonum douglasii var. austinae	**Austin's Knotweed**	
Thlaspi parviflorum	**Small-flowered Pennycress**	

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DEERLODGE NATIONAL FOREST

Sensitive Plants by Habitat

Open Forests

Haplopappus macronema var. macronema ?
Ranunculus jovis ?

Upper Timberlines

Saxifraga tempestiva

Alpine Areas

Haplopappus macronema var. macronema ?
Lesquerella carinata
Oxytropis podocarpa ?
Saussurea weberi
Saxifraga tempestiva
Selaginella watsonii ?

Meadows

Botrychium paradoxum
Carex idahoa
Claytonia lanceolata var. flava
Erigeron flagellaris ?

Seeps & Springs

Epipactis gigantea ?

Grasslands

Claytonia lanceolata var. flava
Lesquerella carinata
Penstemon lemhiensis ?

Sagebrush Grasslands

Claytonia lanceolata var. flava
Penstemon lemhiensis ?
Ranunculus jovis ?

Rocky Areas

Haplopappus macronema var. macronema ?
Selaginella watsonii ?

Bogs & Fens

Antennaria pulcherima ?
Carex idahoa
Mimulus primuloides ?
Thalictrum alpinum ?

Stream Banks & Lake Margins

Epipactis gigantea ?
Salix wolfii var. wolfii

? = Sensitive plant species on the Regional Foresters List suspected to occur on the Deerlodge National Forest.
(All others on the list are known to occur on the Forest)

DEERLODGE NATIONAL FOREST

Watch Plants by Habitat

Open Forests

Carex multicostata ?
Dephinium andersonii ?
Pedicularis contorta var. ctenophora ?

Upper Timberline

Arenaria kingii ?
Carex occidentalis ?
Juncus hallii ?
Pedicularis contorta var. ctenophora ?

Alpine Areas

Arenaria kingii ?
Carex occidentalis ?

Meadows

Agrostis lackschewitzii
Astragalus leptaleus ?
Carex multicostata ?
Castilleja longispica ?
Juncus hallii ?
Pedicularis contorta var. ctenophora ?

Grasslands

Carex occidentalis ?
Castilleja longispica ?
Orobanche corymbosa ?
Pedicularis contorta var. ctenophora ?
Phlox kelseyi var. missoulensis ?

Open Rocky Areas

Arabis fecunda ?
Phlox kelseyi var. missoulensis ?
Polygonum douglasii var. austiniae ?

Moist Rocky Areas

Asplenium trichomanes ?
Polystichum kruckebergii

Cliff Crevices

Asplenium trichomanes ?
Polystichum kruckebergii
Thlaspi parviflorum ?

Alkaline Areas

Astragalus leptaleus ?

Calcareous Areas

Arabis fecunda ?
Thlaspi parviflora ?

Bogs & Fens

Eriophorum viridicarinatum ?

Seeps & Springs

Agrostis lackschewitzii

DEERLODGE NATIONAL FOREST

Watch Plants by Habitat

Sagebrush Grasslands	Stream Banks & Lake Margins
Carex occidentalis ?	Carex multicostata ?
Castilleja longispica ?	
Delphinium andersonii ?	
Orobanche corymbosa ?	

? = Watch plant species on the Regional Foresters List suspected to occur on Deerlodge National Forest.
(all others on list are known on the Forest)

FLATHEAD NATIONAL FOREST

Sensitive Plant Species

Scientific name	Common name	Fed. Status
Known to occur on the Forest:		
Cypripedium calceolus var. parviflorum	Small Yellow Lady's-slipper	
Cypripedium passerinum	Sparrow's-egg Lady's-slipper	
Epipactis gigantea	Giant Helleborine	
Geocaulon lividum	Northern Bastard Toad-flax	
Howellia aquatilis	Water Howellia	C2
Orchis rotundifolia	Round-leaved Orchis	
Oxytropis columbiana	Columbia River Crazy Weed	
Potamogeton obtusifolius	Blunt-leaved Pondweed	
Viola renifolia	Kidney-leaved Violet	
Suspected to occur on the Forest:		
Allium fibrillum	Fringed Onion	
Astragalus molybdenus	Leadville Milkvetch	
Botrychium paradoxum	Peculiar Moonwort	C2
Carex livida	Pale Sedge	
Carex paupercula	Poor Sedge	
Chrysosplenium tetrandrum	Northern Golden-carpet	
Drosera linearis	Linear-leaved Sundew	
Grindelia howellii	Howell's Gumweed	C2
Lomatium geyeri	Geyer's Biscuit-root	
Oxytropis podocarpa	Stalked-pod Crazyweed	
Salix barrattiana	Barratt Willow	
Saussurea densa	Dwarf Saw-wort	

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FLATHEAD NATIONAL FOREST

Watch Plant Species

Scientific name	Common name	Fed. Status
Known to occur on the Forest:		
Botrychium minganense	Mingan Island Moonwort	
Cardamine rupicola	Cliff Toothwort	3C
Erigeron lackschewitzii	Front Mountain Erigeron	
Scirpus subterminalis	Water Bulrush	
Synthyris canbyi	Canby's Synthyris	3C
Suspected to occur on the Forest:		
Asplenium trichomanes	Maidenhair Spleenwort	
Astragalus leptaleus	Park Milkvetch	
Botrychium crenulatum	Wavy Moonwort	C2
Carex lenticularis var. dolia	Goose-grass Sedge	C2
Cypripedium fasciculatum	Clustered Lady,s-slipper	3C
Eriophorum viridicarinatum	Green-keeled Cottonsedge	
Kobresia simpliciuscula	Simple Kobresia	
Polystichum kruckebergii	Kruckeberg's Sword-fern	3C
Silene spaldingii	Spalding's Catchfly	C2
Zizia aurea	Golden Alexanders	

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FLATHEAD NATIONAL FOREST

Sensitive Plants by Habitat

Swampy Forests

Geocaulon lividum
Viola renifolia

Moist Forests

Cypripedium calceolus v. parviflorum
Cypripedium passerinum
Geocaulon lividum
Orchis rotundifolia

Dry Open Forests

Grindelia howellii ?
Lomatium geyeri ?

Upper Timberlines

Salix barrattiana ?

Alpine Areas

Astragalus molybdenus ?
Oxytropis podocarpa ?
Salix barrattiana ?
Saussurea densa ?

Meadows

Allium fibrillum ?
Botrychium paradoxum ?
Cypripedium calceolus v. parviflorum
Grindelia howellii ?
Lomatium geyeri ?

Grasslands

Grindelia howellii ?
Lomatium geyeri ?

Rocky Areas

Chrysosplenium tetrandrum ?

Bogs & Fens

Carex livida ?
Carex paupercula ?
Cypripedium calceolus v. parviflorum
Drosera linearis ?

Stream Banks & Lake Margins

Epipactis gigantea
Orchis rotundifolia
Oxytropis columbiana

Vernal Pools

Howellia aquatilis

River Banks

Oxytropis columbiana

Ponds & Lakes

Potamogeton obtusifolius

Seeps & Springs

Chrysosplenium tetrandrum ?
Cypripedium passerinum
Epipactis gigantea

? = Sensitive plant species on the Regional Foresters List suspected to occur on Flathead National Forest.
(All others on the list are known to occur on the Forest)

FLATHEAD NATIONAL FOREST

Watch Plants by Habitat

Moist Forests

Botrychium crenulatum ?
Botrychium minganense
Cypripedium fasciculatum ?

Upper Timberline

Cardamine rupicola
Synthyris canbyi

Alpine Areas

Cardamine rupicola
Carex lenticularis var. dolia ?
Erigeron lackschewitzii
Kobresia simpiciuscula ?
Synthyris canbyi

Meadows

Astragalus leptalus
Botrychium minganense
Zizia aurea ?

Grasslands

Silene spaldingii ?

Seeps & Springs

Carex lenticularis var. dolia ?
Zizia aurea ?

Shallow Water

Scirpus subterminalis

Open Rocky Areas

Cardamine rupicola
Erigeron lackschewitzii
Synthyris canbyi

Moist Rocky Areas

Asplenium trichomanes ?
Polystichum kruckebergii ?

Cliff Crevices

Asplenium trichomanes ?
Polystichum kruckebergii ?

Alkaline Areas
Astragalus leptaleus ?

Calcareous Areas

Cardamine rupicola
Erigeron lackschewitzii
Synthyris canbyi

Bogs & Fens
Eriophorum viridicarinatum

Stream Banks & Lake Margins

Carex lenticularis var. dolia ?
Zizia aurea ?

? = Watch plant species on the Regional Foresters List suspected to occur on Flathead National Forest.
(all others on list are known to occur on the Forest)

GALLATIN NATIONAL FOREST

Sensitive Plant Species

Scientific name	Common name	Fed. Status
Known to occur on the Forest:		
Claytonia lanceolata var. flava	**Yellow Springbeauty**	**C2**
Ranunculus jovis	**Jove's Buttercup**	
Suspected to occur on the Forest:		
Cirsium subniveum	Jackson's Hole Thistle	
Epipactis gigantea	Giant Helleborine	
Haplopappus macronema var. macronema	Discoid Goldenweed	
Kobresia macrocarpa	Large-fruited Kobresia	
Salix barrattiana	Barratt Willow	
Salix wolfii var. wolfii	Wolf's Willow	
Thalictrum alpinum	Alpine Meadowrue	

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GALLATIN NATIONAL FOREST

Watch Plant Species

Scientific name	Common name	Fed. Status
Known to occur on the Forest:		
Agoseris lackschewitzii	**Pink Agoseris**	
Juncus hallii	**Hall's Rush**	
Suspected to occur on the Forest:		
Astragalus leptaleus	**Park Milkvetch**	
Balsamorhiza macrophylla	**Large-leaved Balsamroot**	
Carex multicostata	**Many-ribbed Sedge**	
Carex occidentalis	**Western Sedge**	
Castilleja gracillima	**Slender Paintbrush**	
Castilleja longispica	**White Paintbrush**	
Delphinium andersonii	**Anderson's Larkspur**	
Erigeron eatonii var. eatonii	**Eaton's Daisy**	
Ligusticum filicinum	**Fern-leaf Lovage**	
Ligusticum porteri	**Porter's Lovage**	
Mentzelia montana	**Mountain Blazing Star**	
Thlaspi parviflorum	**Small-flowered Pennycress**	

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GALLATIN NATIONAL FOREST

Sensitive Plants by Habitat

Grasslands

Claytonia lanceolata var. flava
Ranunculus jovis
Cirsium subniveum ?

Forests
Ranunculus jovis

Sagebrush Areas

Claytonia lanceolata var. flava
Ranunculus jovis
Cirsium subniveum ?
Salix Wolfii var. wolfii ?

Alpine Areas

Haplopappus macronema var. macronema ?
Kobresia macrocarpa ?
Salix barrattiana ?

Subalpine Areas

Haplopappus macronema var. macronema ?
Salix barrattiana ?
Salix wolfii var. wolfii ?

Stream banks, Lake margins, Springs, and Seeps

Epipactis gigantea ?
Kobresia macrocarpa ?
Salix wolfii var. wolfii ?
Thalictrum alpinum ?

Wet alkaline meadows

Thalictrum alpinum ?

? = Sensitive plant species on the Regional Foresters List suspected to occur on Gallatin National Forest.
(all others on list are known to occur on the Forest)

GALLATIN NATIONAL FOREST

Watch Plants by Habitat

Open Forests

Aquilegia brevistyla ?
Carex multicostata ?
Delphinium andersonii ?
Ligusticum filicum ?
Ligusticum porteri ?

Upper Timberline

Carex occidentalis ?
Juncus hallii

Alpine Areas

Carex occidentalis ?

Meadows

Agoseris lackschewitzii
Astragalus leptaleus ?
Balsamorhiza macrophylla ?
Carex multicostata ?
Castilleja gracillima ?
Castilleja longispica ?
Erigeron eatonii var. eatonii
Juncus hallii
Ligusticum filicinum ?
Ligusticum porteri ?
Thlaspi parviflorum ?

Sagebrush Grasslands

Carex occidentalis ?
Castilleja longispica ?
Delphinium andersonii ?

Cliff Crevices

Thlaspi parviflorum ?

Alkaline Areas

Astragalus leptaleus ?

Calcareous Areas

Thlaspi parviflorum ?

Seeps & Springs

Agoseris lackschewitzii
Carex multicostata ?

Stream Banks & Lake Margins

Aquileja brevistyla ?
Carex multicostata ?
Castilleja gracillima ?

Grasslands

Balsamorhiza macrophylla ?
Carex occidentalis ?
Castilleja longispica ?
Erigeron eatonii var. eatonii
Mentzelia montana ?

? = Watch plant species on the Regional Foresters List suspected to occur on Gallatin National Forest.
(all others on list are known to occur on the Forest)

HELENA NATIONAL FOREST

Sensitive Plant Species

Scientific name	Common name	Fed. Status
Known to occur on the Forest:		
Carex livida	**Pale Sedge**	
Drosera linearis	**Linear-leaved Sundew**	
Suspected to occur on the Forest:		
Astragalus molybdenus	**Leadville Milkvetch**	
Botrychium paradoxum	**Peculiar Moonwort**	**C2**
Carex paupercula	**Poor Sedge**	
Cypripedium passerinum	**Sparrow's-egg Lady's-slipper**	
Epipactis gigantea	**Giant Helleborine**	
Erigeron flagellaris	**Trailing Fleabane**	
Orchis rotundifolia	**Round-leaved Orchis**	
Oxytropis podocarpa	**Stalked-pod Crazyweed**	
Thalictrum alpinum	**Alpine Meadowrue**	

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HELENA NATIONAL FOREST

Watch Plant Species

Scientific name	Common name	Fed. Status
Known to occur on the Forest:		
Juncus hallii	Hall's Rush	
Lesquerella klausii	Divide Bladderpod	
Phlox kelseyi var. missoulensis	Missoula Phlox	3C
Polygonum douglasii var. austinae	Austin's Knotweed	
Scirpus subterminalis	Water Bulrush	
Suspected to occur on the Forest:		
Agoseris lackschewitzii	Pink Agoseris	
Asplenium trichomanes	Maidenhair Spleenwort	
Astragalus leptaleus	Park Milkvetch	
Cardamine rupicola	Cliff Toothwort	3C
Cirsium longistylum	Long-styled Thistle	
Erigeron lackschewitzii	Front Mountain Erigeron	
Eriophorum viridicarinatum	Green-keeled Cottonsedge	

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HELENA NATIONAL FOREST

Sensitive Plant by Habitat

Moist Forests

Cypripedium passerinum ?
Orchis rotundifolia ?

Alpine Areas

Astragalus molybdenus ?
Oxytropis podocarpa ?

Meadows

Botrychium paradoxum ?
Erigeron flagellaris ?

Bogs & Fens

Carex livida
Carex paupercula ?
Drosera linearis
Thalictrum alpinum ?

Stream Banks & Lake Margins

Epipactis gigantea ?
Orchis rotundifolia ?

Seeps & Springs

Cypripedium passerinum ?
Epipactis gigantea ?

? = Sensitive plant species on the Regional Foresters List suspected to occur on the Helena National Forest.
(All others on list are known to occur on the Forest)

HELENA NATIONAL FOREST

Watch Plants by Habitat

Upper Timberline

Cardamine rupicola
Juncus hallii
Lesquerella klausii

Alpine Areas

Cardamine rupicola
Erigeron lackschewitzii ?

Meadows

Agoseris lackechewitzii ?
Astragalus leptaleus ?
Cirsium longistylum
Juncus hallii

Grasslands

Cirsium longistylum
Phlox kelseyi var. missoulensis

Bogs & Fens

Eriophorum viridicarinatum ?

Shallow Water

Scirpus subterminalis

Open Rocky Areas

Cardamine rupicola
Erigeron lackschewitzii ?
Lesquerella klausii
Phlox kelseyi var. missoulensis
Polygonum douglasii var. austiniae

Moist Rocky Areas

Asplenium trichomanes ?

Cliff Crevices

Asplenium trichomanes ?

Alkaline Areas

Astragalus leptaleus ?

Calcareous Areas

Cardamine rupicola
Erigeron lackschewitzii ?

Seeps & Springs

Agoseris lackschewitzii ?

? = Watch plant species on the Regional Foresters List suspected to occur on Helena National Forest.
(all others on list are known to occur on the Forest)

KOOTENAI NATIONAL FOREST

Sensitive Plant Species

Scientific name	Common name	Fed. Status
Known to occur on the Forest:		
Allium fibrillum	Fringed Onion	
Cypripedium calceolus var. parviflorum	Small Yellow Lady's-slipper	
Geocaulon lividum	Northern Bastard Toad-flax	
Lomatium geyeri	Geyer's Biscuit-root	
Suspected to occur on the Forest:		
Calamagrostis tweedyi	Cascade Reedgrass	C2
Chrysosplenium tetrandrum	Northern Golden-carpet	
Clarkia rhomboidea	Common Clarkia	
Epipactis gigantea	Giant Helleborine	
Eupatorium occidentale	Western Boneset	
Grindelia howellii	Howell's Gumweed	C2
Howellia aquatilis	Water Howellia	C2
Orchis rotundifolia	Round-leaved Orchis	
Oxytropis columbiana	Columbia River Crazy Weed	
Satureja douglasii	Yerba Buena	
Viola renifolia	Kidney-leaved Violet	

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KOOTENAI NATIONAL FOREST

Watch Plant Species

Scientific name	Common name	Fed. Status
Known to occur on the Forest:		
Scirpus subterminalis	Water Bulrush	
Suspected to occur on the Forest:		
Asplenium trichomanes	Maidenhair Spleenwort	
Botrychium crenulatum	Wavy Moonwort	C2
Botrychium minganense	Mingan Island Moonwort	
Cypripedium fasciculatum	Clustered Lady,s-slipper	3C
Eriophorum viridicarinatum	Green-keeled Cottonsedge	
Scirpus cyperinus	Wool Grass	
Silene spaldingii	Spalding's Catchfly	C2
Zizia aurea	Golden Alexanders	

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KOOTENAI NATIONAL FOREST

Sensitive Plants by Habitat

Wet Forests

Geocaulon lividum
Viola renifolia ?

Moist Forests

Cypripedium calceolus v. parviflorum
Geocaulon lividum
Orchis rotundifolia ?
Satureja douglasii ?

Dry Open Forests

Clarkia rhomboidea ?
Grindelia howellii ?
Lomatium geyeri

Subalpine Forests

Calamagrostis tweedyi ?

Meadows

Allium fibrillum
Calamagrostis tweedyi ?
Cypripedium calceolus v. parviflorum
Grindelia howellii ?
Lomatium geyeri

Grasslands

Grindelia howellii ?
Lomatium geyeri

Rocky Areas

Chrysosplenium tetrandrum ?
Eupatorium occidentale ?

Bogs & Fens

Cypripedium calceolus v. parviflorum

Stream Banks & Lake Margins

Epipactis gigantea ?
Orchis rotundifolia ?

Vernal Pools

Howellia aquatilis ?

Rocky River Banks & Lake Shores

Oxytropis columbiana ?

Seeps & Springs

Chrysosplenium tetrandrum ?
Epipactis gigantea ?

? = Sensitive plant species on the Regional Foresters List suspected to occur on the Kootenai National Forest.
(All others on list are known to occur on the Forest)

7/88

KOOTENAI NATIONAL FOREST

Watch Plants by Habitat

Moist Forests

Botrychium crenulatum ?
Botrychium minganense ?
Cypripedium fasciculatum ?

Meadows

Botrychium minganense ?

Grasslands

Silene spaldingii ?

Moist Rocky Areas

Asplenium trichomanes ?

Cliff Crevices

Asplenium trichomanes ?

Bogs & Fens

Eriophorum viridicarinatum ?
Scirpus cyperinus

Shallow Water

Scirpus subterminalis

? = Watch plant species on the Regional Foresters List suspected to occur on Kootenai National Forest.
(all others on list are known to occur on the Forest)

LEWIS AND CLARK NATIONAL FOREST

Sensitive Plant Species

Scientific name	Common name	Fed. Status
Known to occur on the Forest:		
Antennaria pulcherrima	Showy Pussytoes	
Astragalus molybdenus	Leadville Milkvetch	
Botrychium paradoxum	Peculiar Moonwort	C2
Cypripedium calceolus var. parviflorum	Small Yellow Lady's-slipper	
Cypripedium passerinum	Sparrow's-egg Lady's-slipper	
Erigeron flagellaris	Trailing Fleabane	
Orchis rotundifolia	Round-leaved Orchis	
Oxytropis podocarpa	Stalked-pod Crazyweed	
Saussurea densa	Dwarf Saw-wort	
Suspected to occur on the Forest:		
Carex livida	Pale Sedge	
Carex paupercula	Poor Sedge	
Drosera linearis	Linear-leaved Sundew	
Epipactis gigantea	Giant Helleborine	
Potamogeton obtusifolius	Blunt-leaved Pondweed	
Salix barrattiana	Barratt Willow	
Thalictrum alpinum	Alpine Meadowrue	
Viola renifolia	Kidney-leaved Violet	

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LEWIS AND CLARK NATIONAL FOREST

Watch Plant Species

Scientific name	Common name	Fed. Status
Known to occur on the Forest:		
Agoseris lackschewitzii	Pink Agoseris	
Cardamine rupicola	Cliff Toothwort	3C
Cirsium longistylum	Long-styled Thistle	
Erigeron lackschewitzii	Front Mountain Erigeron	
Lesquerella klausii	Divide Bladderpod	
Phlox kelseyi var. missoulensis	Missoula Phlox	3C
Polygonum douglasii var. austinae	Austin's Knotweed	
Suspected to occur on the Forest:		
Aquilegia brevistyla	Short-styled columbine	
Asplenium trichomanes	Maidenhair Spleenwort	
Astragalus leptaleus	Park Milkvetch	
Botrychium minganense	Mingan Island Moonwort	
Eriophorum viridicarinatum	Green-keeled Cottonsedge	
Kobresia simpliciuscula	Simple Kobresia	
Polystichum kruckebergii	Kruckeberg's Sword-fern	3C
Rorippa calycina	Persistent Yellowcress	C2
Scirpus subterminalis	Water Bulrush	

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LEWIS & CLARK NATIONAL FOREST

Sensitive Plant Species

Wet Forests

Viola renifolia ?

Moist Forests

Cypripedium calceolus v. parviflorum
Cypripedium passerinum
Orchis rotundifolia

Timberlines

Salix barrattiana ?

Alpine Areas

Astragalus molybdenus
Oxytropis podocarpa
Salix barratiana ?
Saussurea densa

Meadows

Botrychium paradoxum
Cypripedium calceolus v. parviflorum
Erigeron flagellaris

Bogs & Fens

Antennaria pulcherrima
Carex livida ?
Carex paupercula ?
Cypripedium calceolus v. parviflorum
Drosera linearis ?
Thalictrum alpinum ?

Stream Banks & Lake Margins

Epipactis gigantea ?
Orchis rotundifolia

Ponds & Lakes

Potamogeton obtusifolius ?

Seeps & Springs

Cypripedium passerinum
Epipactis gigantea ?

? = Sensitive plant species on the Regional Foresters List suspected to occur on the Lewis & Clark National Forest.
(All others on list are known to occur on the Forest)

LEWIS & CLARK NATIONAL FOREST

Watch Plants by Habitat

Moist Forests

Botrychium minganense ?

Open Forests

Aquileja brevistyla

Upper Timberline

Cardamine rupicola
Lesquerella klausii

Alpine Areas

Cardamine rupicola
Erigeron lackschewitzii
Kobresia simpliciuscula

Meadows

Agoseris lackschewitzii
Astragalus leptaleus ?
Botrychium minganense ?
Cirsium longistylum

Grasslands

Cirsium longistylum
Phlox kelseyi var. missoulensis

Seeps & Springs

Agoseris lackschewitzii

Shallow Water

Scirpus subterminalis ?

Open Rocky Areas

Cardamine rupicola
Erigeron lackschewitzii
Lesquerella klausii
Phlox kelseyi var. missoulensis
Polygonum douglasii var. austiniae
Polystichum kruckebergii ?

Moist Rocky Areas

Asplenium trichomanes ?

Cliff Crevices

Asplenium trichomanes ?
Polystichum kruckebergii ?

Alkaline Areas

Astragalus leptaleus ?

Calcareous Areas

Cardamine rupicola
Erigeron lackschewitzii

Bogs & Fens

Eriophorum viridicarinatum ?

Stream Banks & Lake Margins

Aquilegia brevistyla
Rorippa calycina ?

? = Watch plant species on the Regional Foresters List suspected to occur on Lewis & Clark National Forest.
(all others on list are known to occur on the Forest)

LOLO NATIONAL FOREST

Sensitive Plant Species

Scientific name	Common name	Fed. Status
Known to occur on the Forest:		
Calamagrostis tweedyi	Cascade Reedgrass	C2
Carex paupercula	Poor Sedge	
Clarkia rhomboidea	Common Clarkia	
Eupatorium occidentale	Western Boneset	
Grindelia howellii	Howell's Gumweed	C2
Mertensia bella	Oregon Bluebell	
Satureja douglasii	Yerba Buena	
Suspected to occur on the Forest:		
Allium fibrillum	Fringed Onion	
Athysanus pusillus	Sandweed	
Botrychium paradoxum	Peculiar Moonwort	C2
Carex idahoa	Idaho Sedge	3C
Chrysosplenium tetrandrum	Northern Golden-carpet	
Cypripedium calceolus var. parviflorum	Small Yellow Lady's-slipper	
Cypripedium passerinum	Sparrow's-egg Lady's-slipper	
Epipactis gigantea	Giant Helleborine	
Geocaulon lividum	Northern Bastard Toad-flax	
Howellia aquatilis	Water Howellia	C2
Lesquerella carinata	Keeled Bladderpod	3C
Orchis rotundifolia	Round-leaved Orchis	
Potamogeton obtusifolius	Blunt-leaved Pondweed	
Viola renifolia	Kidney-leaved Violet	

LOLO NATIONAL FOREST

Watch Plant Species

Scientific name	Common name	Fed. Status
Known to occur on the Forest:		
Orogenia linearifolia	Great Basin Orogenia	
Synthyris canbyi	Canby's Synthyris	3C
Trisetum orthochaetum	Bitterroot Trisetum	C2
Suspected to occur on the Forest:		
Arabis fecunda	Sapphire Rockcress	C2
Astragalus leptaleus	Park Milkvetch	
Botrychium crenulatum	Wavy Moonwort	C2
Botrychium minganense	Mingan Island Moonwort	
Cardamine rupicola	Cliff Toothwort	3C
Cypripedium fasciculatum	Clustered Lady,s-slipper	3C
Eriophorum viridicarinatum	Green-keeled Cottonsedge	
Gentianopsis simplex	Hiker's Gentian	
Phlox kelseyi var. missoulensis	Missoula Phlox	3C
Polystichum kruckebergii	Kruckeberg's Sword-fern	3C
Scirpus cyperinus	Wool Grass	
Scirpus subterminalis	Water Bulrush	
Silene spaldingii	Spalding's Catchfly	C2
Trifolium eriocephalum var. piperi	Woolly-head Clover	
Trifolium gymnocarpon	Hollyleaf Clover	

LOLO NATIONAL FOREST

Sensitive Plants by Habitats

Wet Forests

Geocaulon lividum ?
Viola renifolia ?

Moist Forests

Cypripedium calceolus v. parviflorum ?
Cypripedium passerinum ?
Geocaulon lividum
Mertensia bella
Orchis rotundifolia ?
Satureja douglasii

Dry Open Forests

Clarkia rhomboidea
Grindelia howellii

Subalpine Forests

Calamagrostis tweedyi
Mertensia bella

Alpine Areas

Lesquerella carinata ?

Meadows

Allium fibrillum ?
Botrychium paradoxum ?
Calamagrostis tweedyi
Cypripedium calceolus v. parviflorum ?
Grindelia howellii

Grasslands

Grindelia howellii
Lesquerella carinata ?

Rocky Places

Athysanus pusillus ?
Chrysosplenium tetrandrum
Eupatorium occidentale

Bogs & Fens

Carex idahoa ?
Carex paupercula
Cypripedium calceolus v. parviflorum ?

Stream Banks & Lake Margins

Athysanus pusillus ?
Epipactis gigantea
Orchis rotundifolia ?

Vernal Pools

Howellia aquatilis ?

Ponds & Lakes

Potamogeton obtusifolius ?

Seeps & Springs

Chrysosplenium tetrandrum ?
Cypripedium passerinum ?
Epipactis gigantea

? = Sensitive plant species on the Regional Foresters List suspected to occur on Lolo National Forest.
(All others on list are known to occur on the Forest)

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LOLO NATIONAL FOREST

Watch Plants by Habitat

Moist Forests

Botrychium crenulatum ?
Botrychium minganense ?
Cypripedium fasciculatum ?

Open Forests

Trifolium eriocephalum ?
Trifolium gymnocarpon ?

Upper Timberline

Cardamine rupicola ?
Synthyris canbyi

Alpine Areas

Cardamine rupicola ?
Synthyris canbyi

Meadows

Astragalus leptaleus ?
Botrychium minganense ?
Gentianopsis simplex ?
Orogenia linearifolia
Trifolium eriocephalum ?
Trisetum orthochaetum

Grasslands

Orogenia linearifolia
Phlox kelseyi var. missoulensis ?
Silene spaldingii ?
Trifolium gymnocarpon ?

Sagebrush Grasslands

Trifolium gymnocarpon ?

Open Rocky Areas

Arabis fecunda ?
Cardamine rupicola ?
Phlox kelseyi var. missoulensis ?
Polystichum kruckebergii ?

Cliff Crevices

Polystichum kruckebergii ?
Trifolium gymnocarpon ?

Alkaline Areas

Astragalus leptaleus ?

Calcareous Areas

Arabis fecunda ?
Cardamine rupicola ?
Synthyris canbyi

Bogs & Fens

Eriophorum viridicarinatum ?
Scirpus cyperinus ?

Seeps & Springs

Gentianopsis simplex ?
Scirpus cyperinus ?

Stream Banks & Lake Margins

Scirpus cyperinus ?

Shallow Water

Scirpus subterminalis ?

? = Watch plant species on the Regional Foresters List suspected to occur on Lolo National Forest.
(all others on list are known to occur on the Forest)

ALLIUM FIBRILLUM Jones
Fringed Onion

FAMILY: Liliaceae (Lily Family)

SYNONYMS: None.

USFS REGION 1 STATUS: MT - SENSITIVE.

USFWS STATUS: None.

MONTANA STATUS: Threatened.

GLOBAL AND STATE RANK: G3G4/S1

GLOBAL DISTRIBUTION: Eastern OR and se. WA, adjacent ID, and nw. MT.

MONTANA COUNTIES: Flathead, Lincoln.

PHYSIOGRAPHIC DISTRIBUTION: Cabinet Mtns., Glacier National Park.

NATIONAL FORESTS(S): Kootenai; possibly occurring on Flathead, Lolo.

HABITAT: Moist, shallow soil in the montane zone; 600-1800 m (2000-6000 ft.).

DESCRIPTION:
This is a small onion with 2 leaves that are concave in cross-section, 1-3 mm wide, and up to 15 cm (6 in) long. The bulbs are ovoid in shape with a gray or brown outer coat. The flower stalk is up to 15 cm (6 in) tall, usually shorter than the leaves. There are two membranous bracts below the cluster of flowers. The flowers have 6 lance-shaped petals (actually tepals) that are 5-8 mm long, and white or pinkish with green midveins. The ovary does not have a conspicuous crown. Flowering in June.

The only other onion in northwestern Montana that is usually less than 15 cm (6 in) tall with only 2 leaves is A. textile, which has 3 bracts below the flower cluster and bulb coats that are very fibrous, resembling burlap.

COMMENTS:
Collected in the 1930s in Glacier Park. The only recent collection is from the west Cabinet Mtns., at the site of an active mine. This species may be more common than herbarium records indicate.

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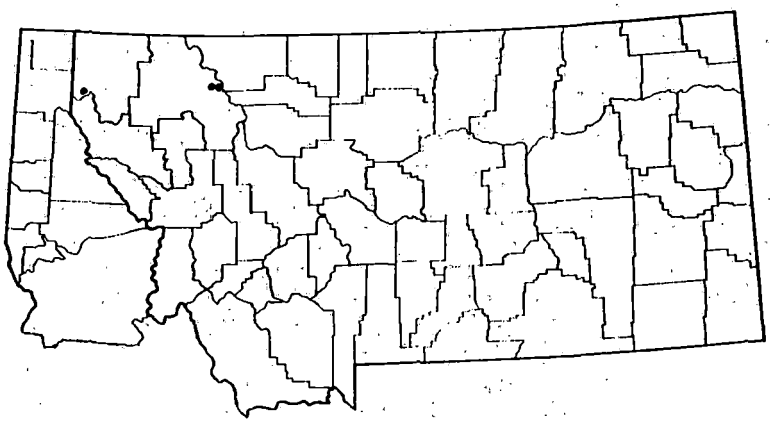
ALLIUM FIBRILLUM



ANTENNARIA PULCHERRIMA (Hook.) Greene
Showy Pussytoes

FAMILY: Asteraceae (Sunflower Family)

SYNONYMS: None.

CITATION:
Hulten, E. 1968. Flora of Alaska and neighboring territories. Stanford University Press. 872p.

REGION 1 STATUS: MT - SENSITIVE.

USFWS STATUS: None.

MONTANA STATUS: Sensitive.

GLOBAL AND STATE RANK: G3G4/S1

GLOBAL DISTRIBUTION: AK to Newf., south in the mountains to B.C., UT, and CO.

MONTANA COUNTIES: Beaverhead, Teton, Big Horn.

PHYSIOGRAPHIC DISTRIBUTION: Centennial Valley, Front Range Mtns.

NATIONAL FORESTS(S):
Lewis & Clark; possibly occurring on Beaverhead, Deerlodge.

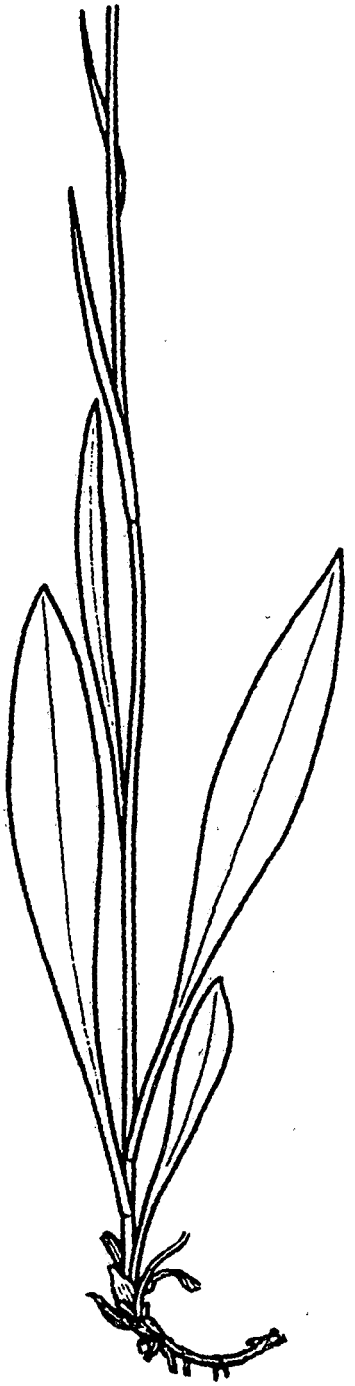
HABITAT:
Hummocks, and around shrubs, in swampy or boggy soil in the montane zone; 1200-2100 m (4000-7000 ft).

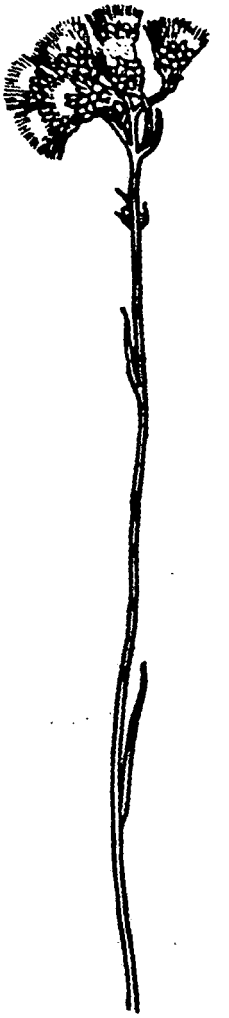
DESCRIPTION:
This perennial species has clustered stems 20-50 cm (8-20 in) tall, from a loosely branched rootcrown. The lance-shaped basal leaves have petioles and are up to 15 cm (6 in) long and 2 cm (1 in) wide. The stem leaves are alternate, smaller and narrower, and the uppermost do not have petioles. The whole plant is densely whitehairy. The flowering heads are borne in a compact, rounded inflorescence. The individual heads are 5-8 mm high with involucral bracts that are hairy toward the greenish base. The upper portion of the bracts is dark brown or greenish-black. Flowering in June.

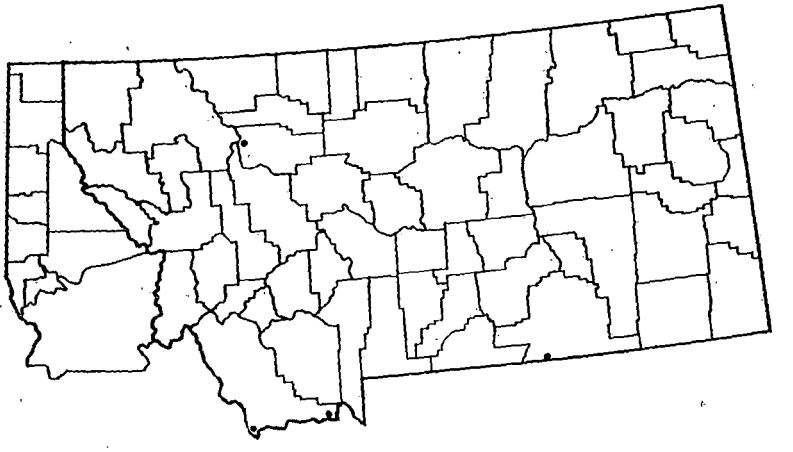
Antennaria, and the closely related genus Gnaphalium, comprise a very difficult group of plants to identify with certainty. The most distinctive feature of A. pulcherrima is that it occurs in boggy or swampy habitats. The only other species usually found in these sites is A. microphylla, which has smaller leaves and tends to form mats.

COMMENTS:
There has been a great deal of confusion between this species and A. anaphaloides. The taxonomy is currently being revised. Apparently A. pulcherrima is less common in the U.S. than previously thought.

ANTENNARIA PULCHERRIMA







ASTRAGALUS BARRII Barneby
Barr's Milkvetch

FAMILY: Fabaceae (Pea Family)

SYNONYMS: None.

USFS REGION 1 STATUS: MT - SENSITIVE.

USFWS STATUS: C2

MONTANA STATUS: Watch List.

GLOBAL AND STATE RANK: G2G3/S2

GLOBAL DISTRIBUTION: Southeastern MT, ne. WY, sw. SD.

MONTANA COUNTIES:
Big Horn, Powder River, Rosebud; historically known in Carter.

PHYSIOGRAPHIC DISTRIBUTION: Northern Great Plains.

NATIONAL FORESTS(S): Custer.

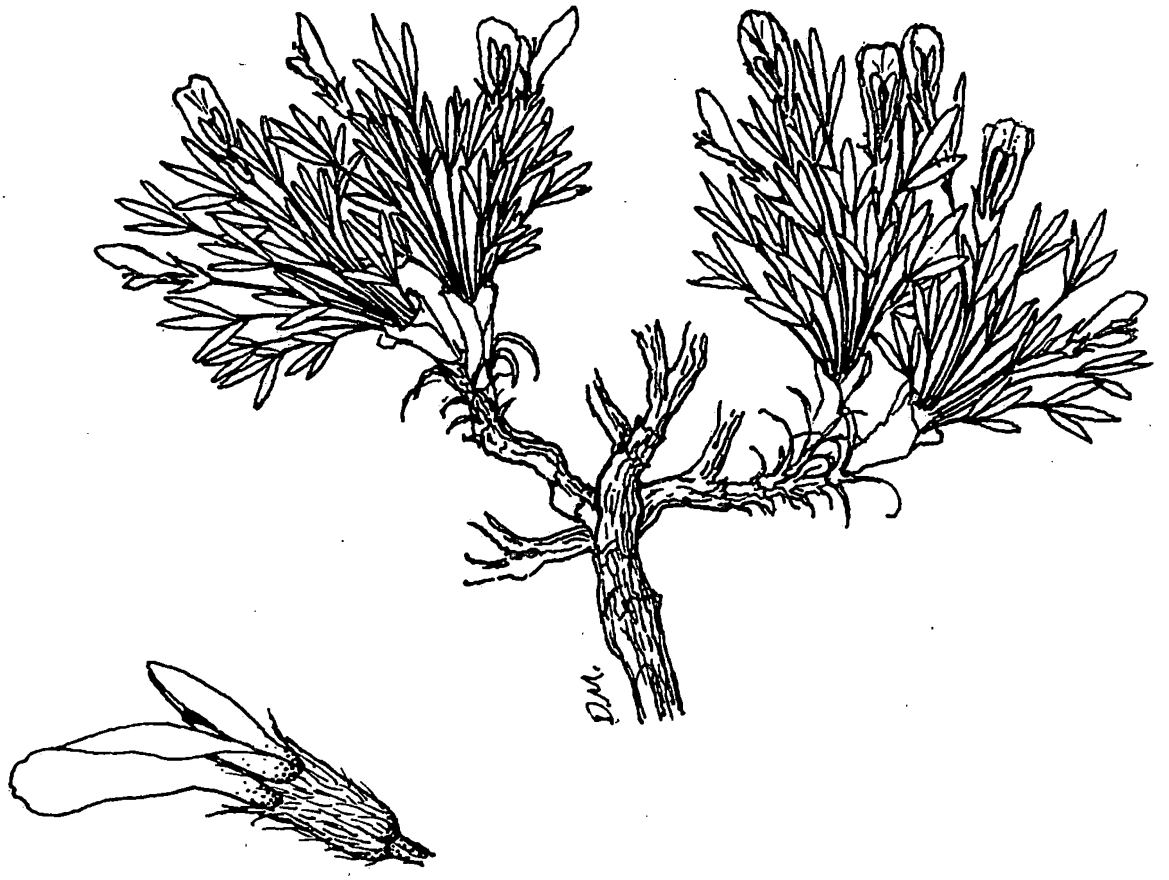
HABITAT:
Gullied knolls, buttes, and barren hills and clifftops, in thin soil on limestone, sandstone, siltstone or clay substrates; below 1430 m (4700 ft); 1020-1300 m (3350-4260 ft) in Montana.

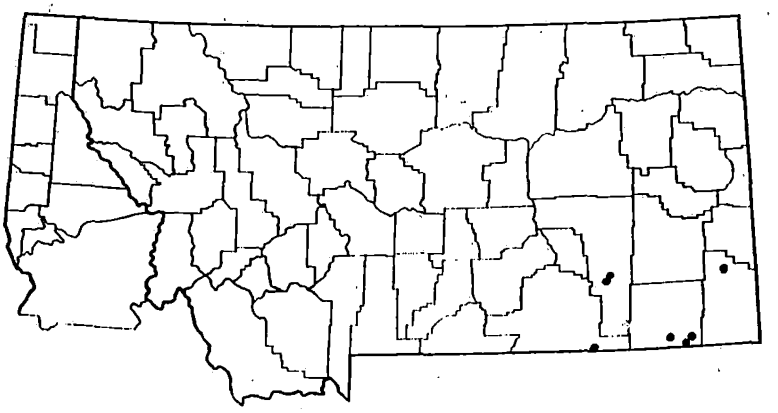
DESCRIPTION:
Barr's milkvetch is a perennial that forms extensive, dense mats, with prostrate or ascending stems up to 2 cm long from a woody rootcrown. The leaves have three narrowly lance-shaped leaflets and are 1-4 cm long. The herbage is densely covered with short white hairs. The stipules at the base of the leaves are membranous. The purple or pinkish-purple flowers (shaped like pea flowers) are borne in a narrow, open, few-flowered inflorescence. The petals are 7-17 mm long. The calyx is 3-5 mm long and densely covered with long, white hairs. The sparsely white-hairy pod (legume) is narrowly elliptic, 4-8 mm long and 1-2 mm in diameter. Flowering in May.

The only other three-leafleted, mat-forming species in the range of A. barrii in Montana is A. gilviflorus, which has larger, yellowish-white flowers (calyx is usually greater than 9 mm long). There are also two other very similar species occurring in the Big Horn Canyon-Pryor Mountain area west of the range of A. barrii: A. aretioides and A. hyalinus.

COMMENTS:
Regional endemic in the northern Great Plains; species was not relocated in Carter Co. during 1986 surveys, but was found to be locally abundant in other verified Montana populations; eleven occurrences were found on the Ashland Ranger District (Custer N.F.) in 1988.

ASTRAGALUS BARRII





ASTRAGALUS MOLYBDENUS Barneby
Leadville Milkvetch

FAMILY: Fabaceae (Pea Family)

SYNONYMS: None.

CITATION:
Barneby, R.C. 1950. Leaflets of Western Botany 6(3):70.
Barneby, R.C. 1949. Pugillus Astragalorum XI: two new species. Leaflets of Western Botany 5(12):193-197.

USFS REGION 1 STATUS: MT - SENSITIVE.

USFWS STATUS: None.

MONTANA STATUS: Sensitive.

GLOBAL AND STATE RANK: G3G4/S1

GLOBAL DISTRIBUTION: Central CO, disjunct to nw. MT.

MONTANA COUNTIES: Teton.

PHYSIOGRAPHIC DISTRIBUTION: Front Range Mtns.

NATIONAL FOREST(S): Lewis & Clark; potentially occurring on Flathead, Helena.

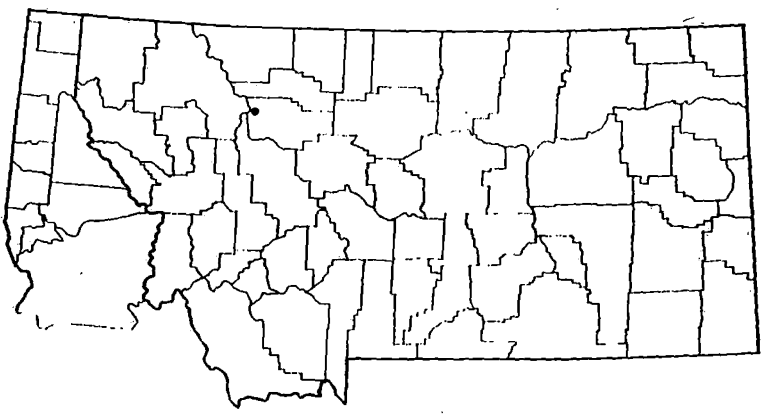
HABITAT:
Turfy hillsides and bare gravel banks above timberline, or in scree or coarse debris of rock slides, on limestone, granite, or shaley bedrock; 2240-4000 m (7350-13000 ft).

DESCRIPTION:
Plants of A. molybdenus are low and loosely tufted or matted, with prostrate or ascending stems up to 6 cm (2 in) long. The leaves are alternate on the stem and 17 cm (1-2 in) long, with 9-25 ovate or elliptic leaflets up to 8 mm long. The herbage is usually sparsely hairy. The 2-6 flowers (shaped like pea flowers) are borne in a narrow, open inflorescence. The petals are 8-13 mm long and purple or occasionally whitish. The calyx is 5-7 mm long and densely covered with long, black hairs. The oval or elliptic pod is 7-11 mm long, 3-4 mm in diameter, and densely covered with black and/or white hairs. Flowering from late June to early August.

The genus Astragalus is very large, and many species that superficially resemble each other can occur in the same habitat. Both A. alpinus and A. bourgovii are small, low species that occur on limestone at high elevations in northwestern Montana. Astragalus alpinus has leaflets that are blunt at the tip and pods that are almost completely divided into two chambers. The pods of A. bourgovii are oval in cross-section, while those of A. molybdenus are more nearly triangular.

COMMENTS:
Similar to A. shultziorum, an alpine species in western Wyoming; additional studies are needed to verify the identity of the single known Montana population. This site, on Mt. Wright, is outside the boundary of the Bob Marshall Wilderness Area.

ASTRAGALUS MOLYBDENUS



ATHYSANUS PUSILLUS (Hook.) Greene
Sandweed

FAMILY: Brassicaceae (Mustard Family)

SYNONYMS: None.

USFS REGION 1 STATUS: MT - SENSITIVE.

USFWS STATUS: None.

MONTANA STATUS: Sensitive.

GLOBAL AND STATE RANK: G4/S1

GLOBAL DISTRIBUTION: Southern B.C. to CA, east to MT, ID and UT.

MONTANA COUNTIES: Ravalli.

PHYSIOGRAPHIC DISTRIBUTION: Bitterroot Mtns.

NATIONAL FOREST(S): Bitterroot; possibly occurring on Lolo.

HABITAT:
Vernally moist, shallow soil on open, rocky shelves and along small drainages, in the foothill and lower montane zones; 1200-1525 m (4000-5000 ft).

DESCRIPTION:
These small annuals are branched at the base, and usually less than 10 cm (4 in) tall. The lance-shaped or spoon-shaped leaves are alternate on the stem, and 6-30 mm long with toothed margins. The lower leaves have short petioles; the upper are smaller and sessile. The herbage is covered with coarse, simple and branched hairs. Each branch terminates in a long, narrow inflorescence bearing many small flowers that quickly bloom and produce fruit. Each flower and fruit is borne on a slender recurved stalk. The four petals are white and 1-2 mm long. The sepals are approximately 1 mm long and glabrous or slightly hairy. The fruit is globose, 2-3 mm in diameter, and covered with hooked hairs. Flowers in April and May.

This species is most likely to be confused with annual members of the genus Draba; however, none of these have fruits covered with hooked hairs.

COMMENTS: This species becomes much more common to the west.

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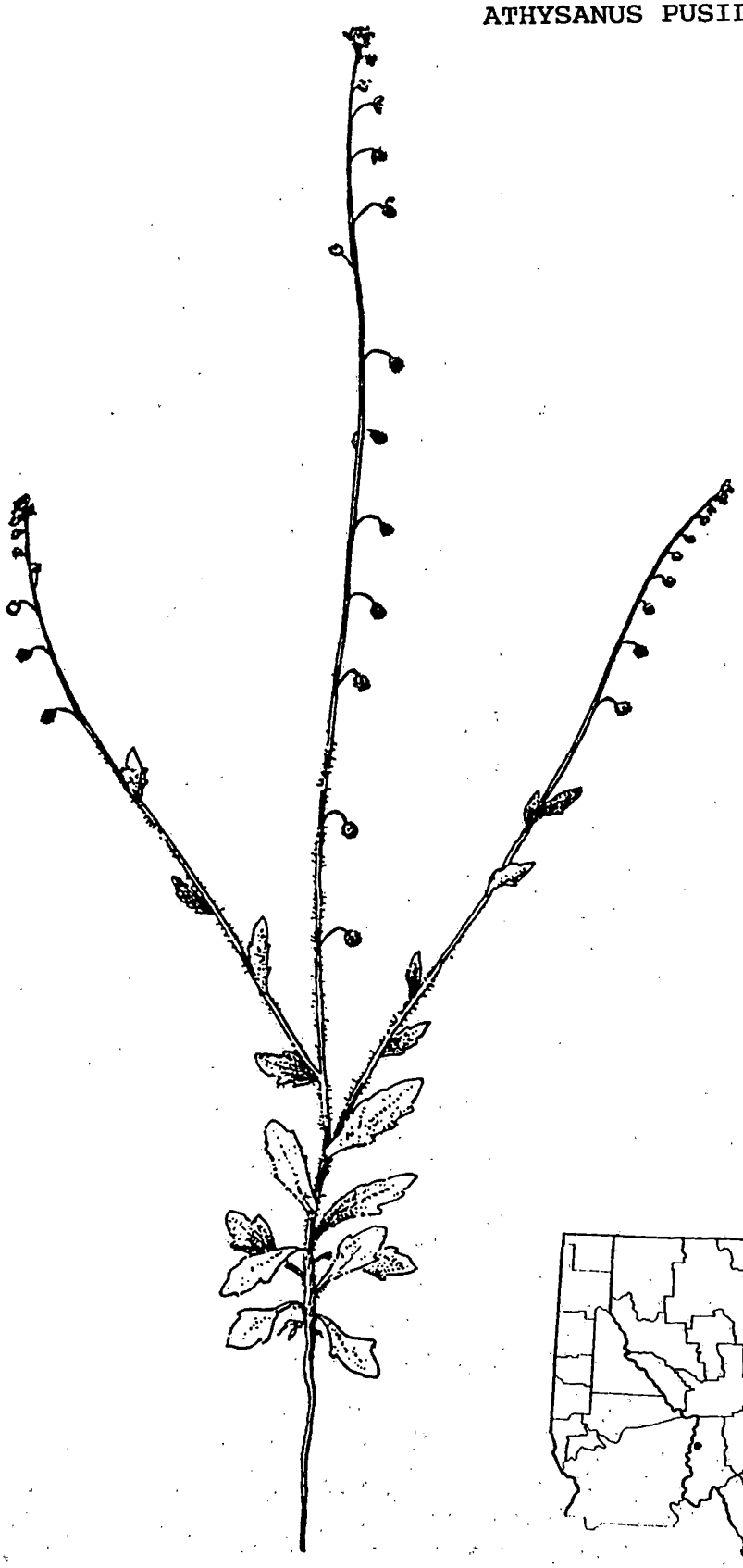
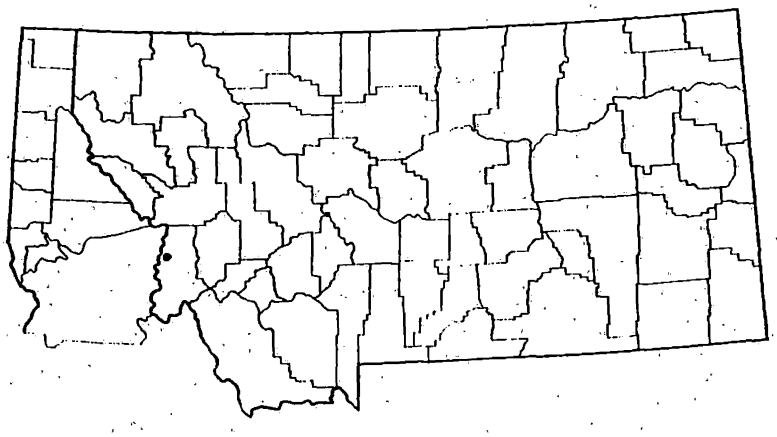
ATHYSANUS PUSILLUS





BOTRYCHIUM PARADOXUM Wagner
Peculiar Moonwort

FAMILY: Ophioglossaceae (Grapefern Family)

SYNONYMS: None.

CITATION:
Wagner, W.H. and F.S. Wagner. 1981. New species of Moonworts, Botrychium subg. Botrychium (Ophioglossaceae), from North America. American Fern Journal 7:20-30.

USFS REGION 1 STATUS: MT - SENSITIVE.

USFWS STATUS: C2

MONTANA STATUS: Threatened.

GLOBAL AND STATE RANK: G1/S1

GLOBAL DISTRIBUTION: Alta., MT, and UT.

MONTANA COUNTIES: Deerlodge, Glacier, Pondera.

PHYSIOGRAPHIC DISTRIBUTION:
Anaconda-Pintlar Range, Glacier National Park and vicinity.

NATIONAL FOREST(S):
Deerlodge, Lewis & Clark; possibly occurring on Beaverhead, Flathead, Helena, Lolo.

HABITAT:
Open meadows and dense stands of tall herbs in the foothill to subalpine zones, often in areas that have experienced some disturbance; 1200-2450 m (4000-8000 ft).

DESCRIPTION:
This small perennial fern consists of a simple leafless stem that terminates in two narrow segments, both of which bear small round spore sacs along the margins. It does not have sterile leaves. The herbage is glabrous and may be somewhat fleshy. The plants are 3-15 cm (1-6 in) tall, the fertile segments are 1-6 cm long, and the spore sacs are about 1 mm in diameter. Plants are in identifiable condition in July and August.

This unusual species is the only fern in our area that has no sterile fronds or leaf-like segments.

COMMENTS:
This small moonwort is very difficult to find. It often occurs with other similar species of Botrychium, including B. lunaria.

BOTRYCHIUM PARADOXUM

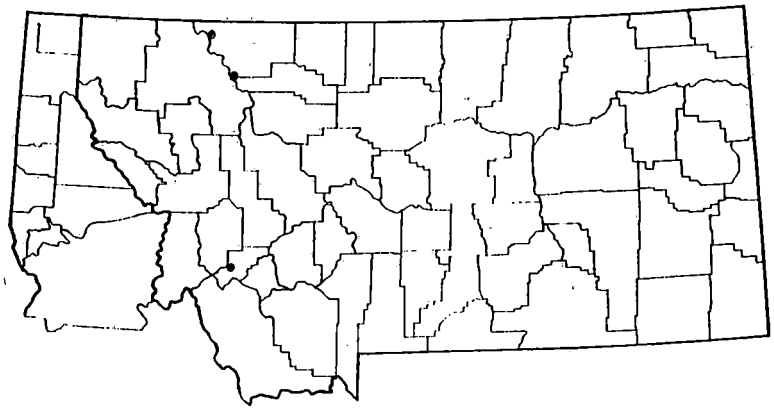
Photocopy

here

prior

to

laminating



CALAMAGROSTIS TWEEDYI (Scribn.) Scribn.
Cascade Reedgrass

FAMILY: Poaceae (Grass Family)

SYNONYMS: DEYEUXIA TWEEDYI Scribn.

USFS REGION 1 STATUS: MT - SENSITIVE; N. ID - SENSITIVE.

USFWS STATUS: C2

MONTANA STATUS: Sensitive.

GLOBAL AND STATE RANK: G3G4/S1

GLOBAL DISTRIBUTION: Central WA, n. ID, w. MT.

MONTANA COUNTIES: Mineral.

PHYSIOGRAPHIC DISTRIBUTION: Bitterroot Mtns.

NATIONAL FOREST(S):
Lolo, Nez Perce; potentially occurring on Kootenai.

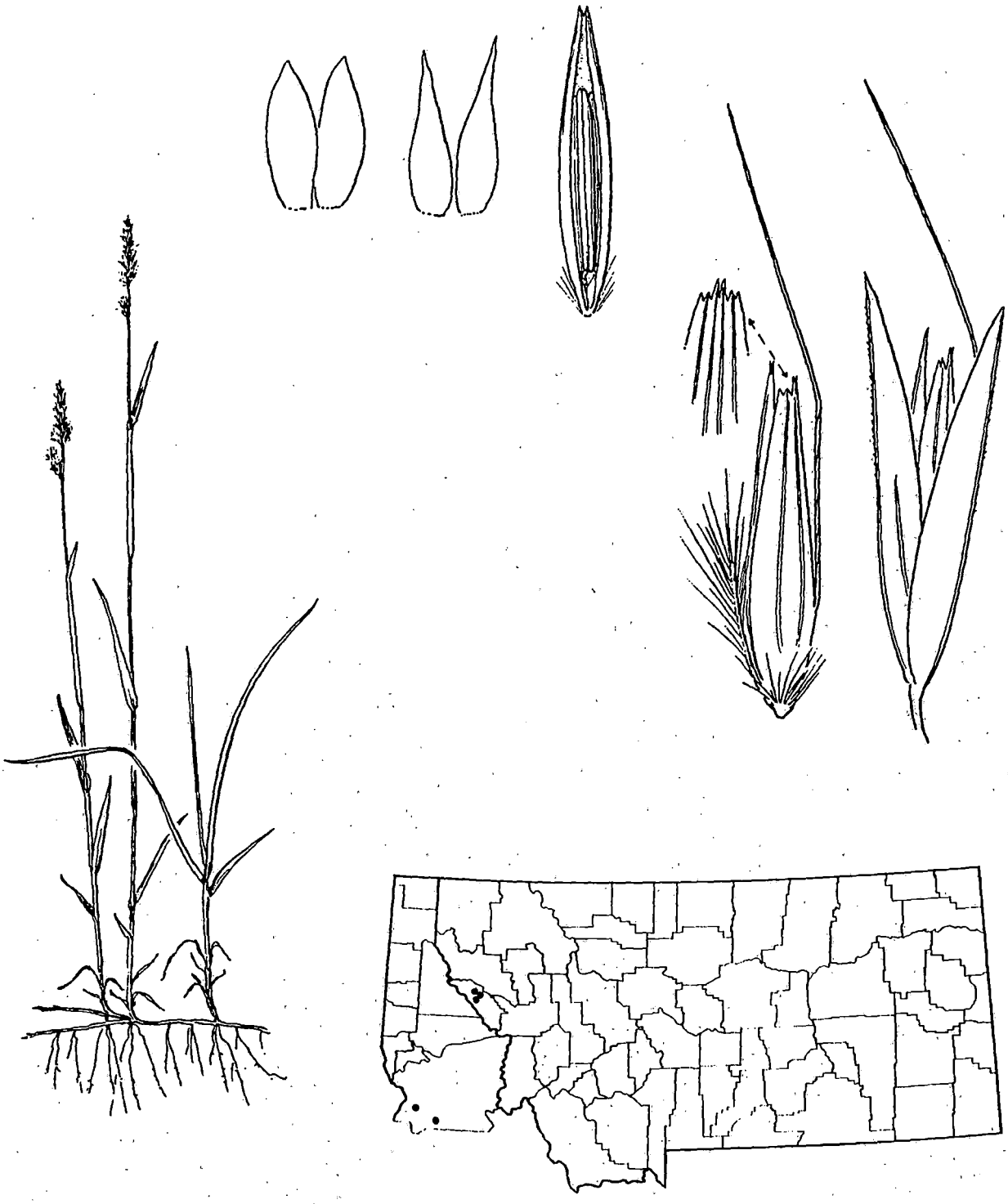
HABITAT:
Montane to subalpine slopes and moist meadows, usually growing in timber in deep, loose humus; 1280-1880 m (4200-6160 ft).

DESCRIPTION:
Cascade Reedgrass is a rhizomatous perennial with stems up to 100 cm (39 in) tall. The leaves of fertile stems are flat, 7-13 mm broad, and usually less than 12 cm (5 in) long. Those of the short sterile shoots are narrower and up to 20 cm (8 in) long. The herbage is mostly glabrous, but the leaves are rough to the touch on the upper surface. The ligules are 6-15 mm long and have a jagged edge. The narrow, compact inflorescence is 8-16 cm (3-6 in) long and about 2 cm broad. Each spikelet usually consists of a pair of glumes and one flower (lemma and palea). The glumes are 5-9 mm long; the lemmas are slightly shorter and have a twisted, slightly bent awn. The hairs at the base of the lemma (callus hairs) are approximately 1 mm long. Flowering and fruiting in July and August.

This species could be confused with either C. rubescens or C. purpurascens; however, both of these have narrower leaves that are usually folded or with rolled edges, rather than being flat. Calamagrostis rubescens usually has some long hairs at the point of leaf attachment. In addition, both of these other species have callus hairs that are usually at least 1.5 mm long.

COMMENTS:
The species appears to have a tolerance for open, disturbed areas, i.e., burned or logged ridges and slopes; abundant flowering has been observed in such sites in Montana.

CALAMAGROSTIS TWEEDYI



CAREX IDAHOA Bailey
Idaho Sedge

FAMILY: Cyperaceae (Sedge Family)

SYNONYMS: C. PARRYANA Dewey ssp. IDAHOA (Bailey) Murray.

USFS REGION 1 STATUS: MT - SENSITIVE.

USFWS STATUS: 3C

MONTANA STATUS: Sensitive.

GLOBAL AND STATE RANK: G3Q/S1

GLOBAL DISTRIBUTION: Southwestern MT and adjacent ID.

MONTANA COUNTIES: Beaverhead, Silver Bow.

PHYSIOGRAPHIC DISTRIBUTION: Mountainous areas in southwest part of Montana.

NATIONAL FORESTS: Beaverhead, Deerlodge.

HABITAT:
Wet meadows in the montane and lower subalpine zones, in regions of calcareous parent material; 1980-2600 m (6500-8500 ft).

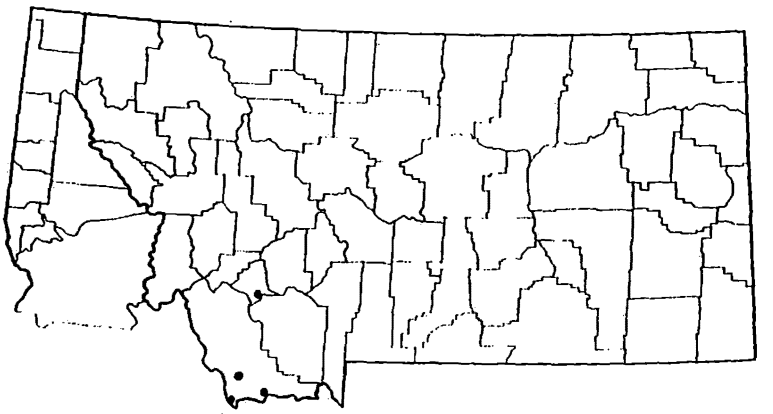
DESCRIPTION:
This sedge has prolonged scaly rootstocks and forms small, loose bunches with flowering stems up to 35 cm (14 in) high that are often reddish tinged at the base. The leaves are 2-4 mm wide with rolled margins, and are clustered towards the base of the plant. The inflorescence usually consists of a cluster of 3 spikes. The larger, terminal spike is 2-3 cm long, and the lower two are 1-2 cm long. The dark brown scales that compose the spikes are ovate with a long, pointed tip. The male flowers (detected by the presence of anthers) are in the terminal spike. The glabrous perigynia (fruit) are ovate, broader toward the top, 3 mm long, and 1.5 mm wide. The enclosed seed is triangular in cross-section. Fruiting in later July and August.

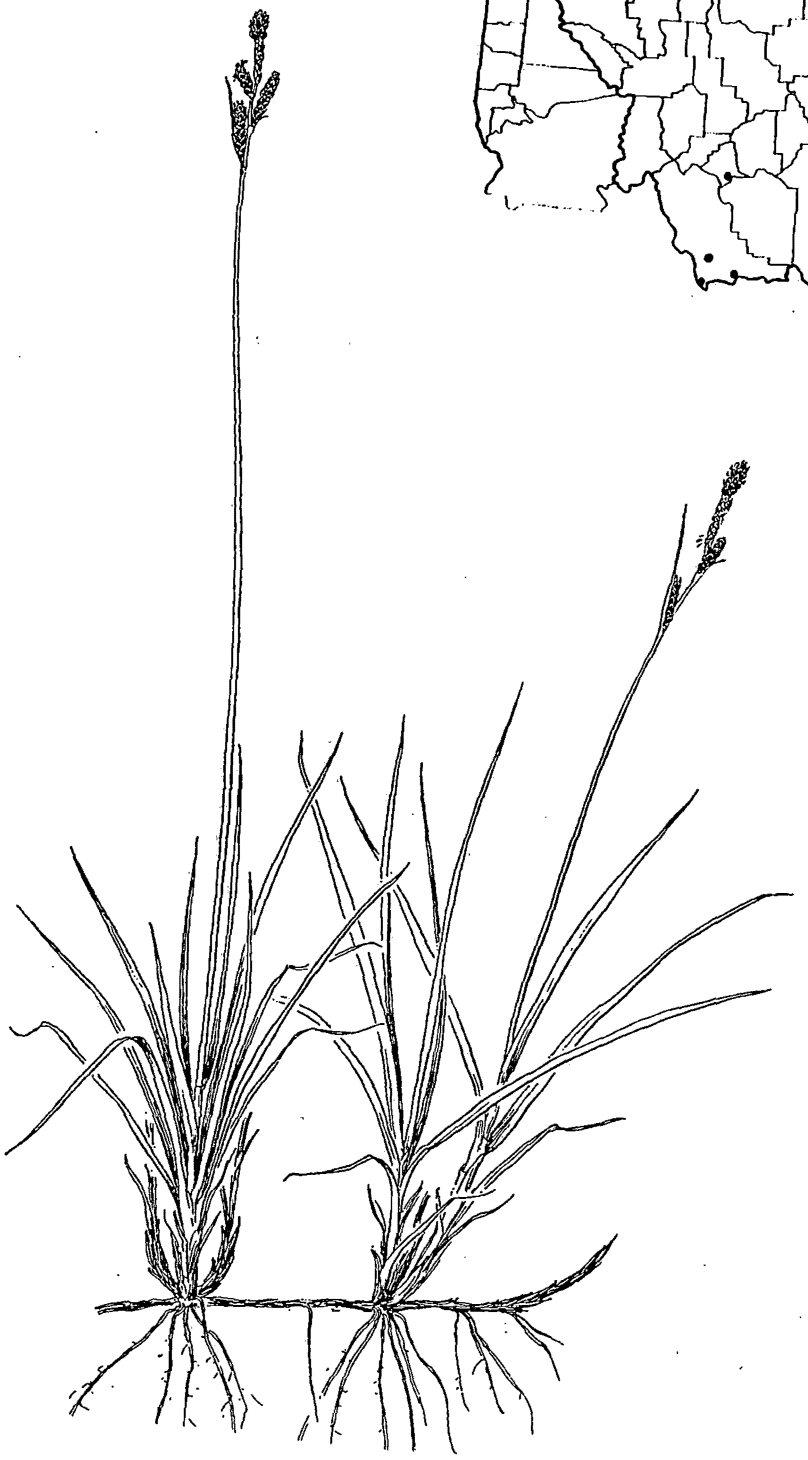
Carex is a very large and difficult group. Specimens with mature fruit are necessary for positive identification. In its limited habitat and range, C. idahoa is the only bunch-forming species with glabrous, triangular perigynia less than 3.5 mm long.

COMMENTS:
Most known populations are small. This species is considered to be a variety of C. parryana by some authorities.

7/88

CAREX IDAHOA





CAREX LIVIDA (Wahl.) Willd.
Pale Sedge

FAMILY: Cyperaceae (Sedge Family)

SYNONYMS: None.

USFS REGION 1 STATUS: MT - SENSITIVE; ID - WATCH.

USFWS STATUS: None.

MONTANA STATUS: Sensitive.

GLOBAL AND STATE RANK: G5/S1

GLOBAL DISTRIBUTION:
Circumboreal, south in North America to WA, MT, MI, and NY; disjunct in CA.

MONTANA COUNTIES: Flathead, Lewis & Clark, Teton.

PHYSIOGRAPHIC DISTRIBUTION: Mountainous areas in northwest part of Montana.

NATIONAL FOREST(S):
Helena; possibly occurring on Flathead, Lewis & Clark, Lolo.

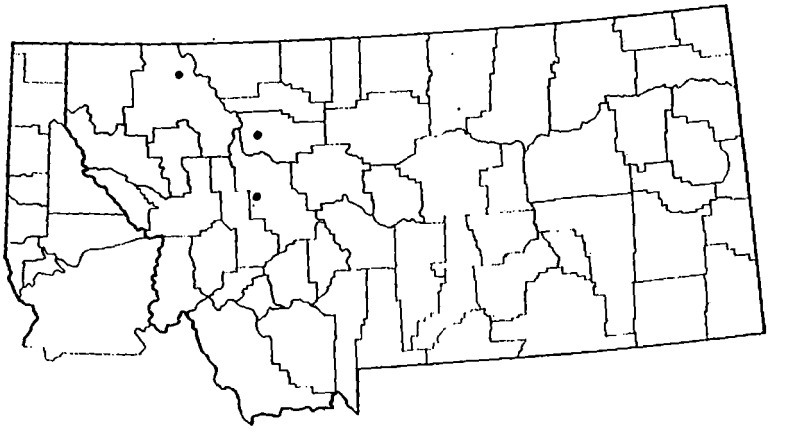
HABITAT:
Bogs and fens in the foothill and montane zones; 1200-1850 m (4000-6000 ft).

DESCRIPTION:
Pale sedge occurs in small clumps arising from long, slender rhizomes, and has flowering stems up to 20 cm (8 in) tall. The leaves are clustered on the lower third of the stem. They have a thin pale-bluish waxy coating, and are 1-4 mm wide with long-pointed tips. The inflorescence consists of 2-3(4) loosely clustered spikes. The narrow terminal spike is 7-30 mm long and composed entirely of male flowers (indicated by the presence of stamens), or with a few fruits borne at the top. The lower spikes are composed entirely of female flowers (indicated by the presence of fruit), and are borne on short stalks. The uppermost leaf (bract) just below the lowest spike usually exceeds the uppermost spike. The scales that make up the spikes are light or dark brown with a green midvein. The perigynia (fruits) are 2-4 mm long, pale green and glabrous, and elliptic or ovate in outline with a short beak at the tip. The enclosed seed is triangular in cross section. Fruiting from late June to early August.

Carex is a very large and difficult genus. Specimens with mature fruit are necessary for positive identification. In its bog habitat, C. livida is best distinguished by its relatively short stature and glaucous (bluish, waxy) foliage.

COMMENTS:
In Montana, this species seems to be confined to areas of calcareous parent material, in undisturbed bogs and fens.

CAREX LIVIDA



CAREX PAUPERCULA Michx.
Poor Sedge

FAMILY: Cyperaceae (Sedge Family)

SYNONYMS: None.

USFS REGION 1 STATUS: MT - SENSITIVE; ID - WATCH.

USFWS STATUS: None.

MONTANA STATUS: Sensitive.

GLOBAL AND STATE RANK: G5/S1

GLOBAL DISTRIBUTION: Circumboreal, south in North America to WA, ID, UT and CO.

MONTANA COUNTIES: Flathead, Missoula.

PHYSIOGRAPHIC DISTRIBUTION: Mountainous areas in northwest part of Montana.

NATIONAL FOREST(S):
Lolo; possibly occurring on Flathead, Helena, Lewis & Clark.

HABITAT: Bogs and fens in the montane zone; 900-2150 m (3000-7000 ft).

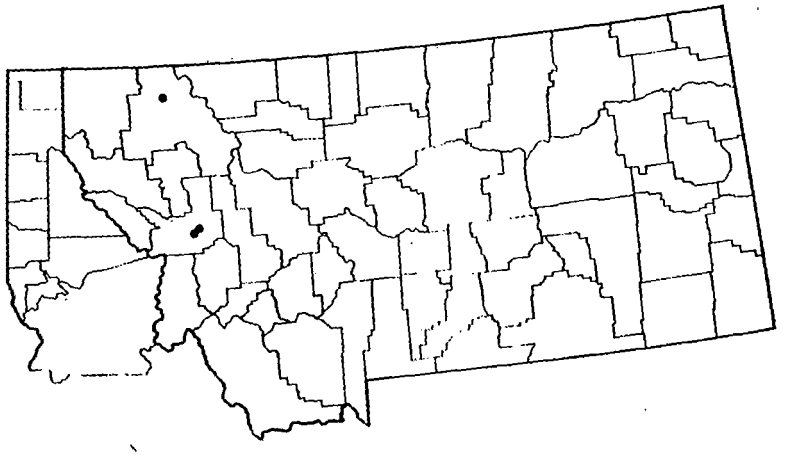
DESCRIPTION:
This sedge forms small clusters on short or long rhizomes, and has flowering stems up to 40 cm (16 in) tall that are conspicuously clothed at the base with the dried leaves of the previous year. The leaves are mostly flat, 2-4 mm wide, and confined to the lower half of the stem. The inflorescence consists of a narrow terminal spike of male flowers (indicated by the presence of anthers), and usually 2-3 mainly female spikes (indicated by the presence of fruits), the lower of which are nodding on long stalks. The terminal spike is 4-12 mm long and 2-4 mm wide. The lower spikes are 4-22 mm long and 4-8 mm wide, and often have a few male flowers at the base. The uppermost leaf (bract) subtending the lowest spike is slightly longer than the terminal spike. The scales which make up the spikes are light or dark brown, often with a greenish midvein. The perigynia (fruit) are pale green, glabrous, oval in outline, and 2-3 mm long. The enclosed seed is triangular in cross-section. Fruiting from July through September.

Carex is a large and difficult genus. Specimens with mature fruit are necessary for positive identification. In its bog habitat, this species occurs with, and can be easily confused with, C. limosa. The latter usually has a few male flowers at the top of the lower spikes, while C. paupercula will have them at the base of the spikes.

COMMENTS:
One of the three known sites in Montana is threatened by peat harvesting.

7/88

CAREX PAUPERCULA



CASTILLEJA COVILLEANA Hend.
Rocky Mountain Paintbrush

FAMILY: Scrophulariaceae (Figwort Family)

SYNONYMS: C. MULTISECTA A. Nels.

USFS REGION 1 STATUS: MT - SENSITIVE.

USFWS STATUS: None.

MONTANA STATUS: Sensitive.

GLOBAL AND STATE RANK: G3G4/S1

GLOBAL DISTRIBUTION: Central ID and adjacent MT.

MONTANA COUNTIES: Ravalli.

PHYSIOGRAPHIC DISTRIBUTION: Bitterroot Mtns.

NATIONAL FOREST(S): Bitterroot; potentially occurring on Beaverhead.

HABITAT:
Rocky mountain slopes, terraces, and summits; 2070-2650 m (6000-8700 ft).

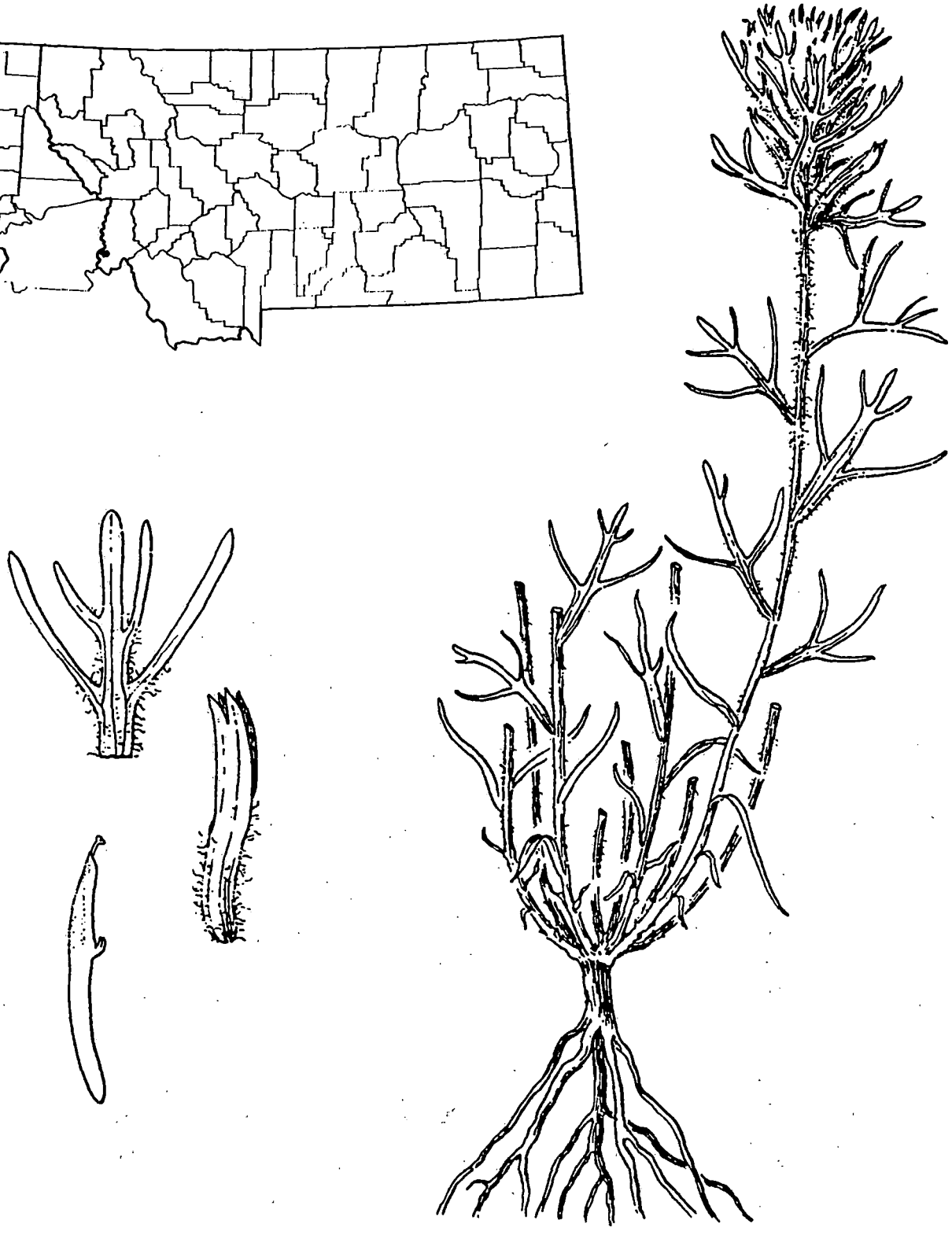
DESCRIPTION:
This perennial paintbrush has clusters of several unbranched, erect or ascending stems up to 30 cm (12 in) tall. The leaves, all except the lowermost ones, are deeply divided into 3-7 spreading, linear lobes, and are alternate on the stem. The herbage is covered with long, soft hairs. The inflorescence is usually bright red or scarlet, but may be orange or even red. It is short and compact at first, but elongates greatly at maturity. The colored flower bracts are deeply 5-7 parted, and at least as long as the flowers. The corolla is 20-35 mm long, and the hooded upper lip is 1/2-2/3 the length of the tubular portion. The calyx is 15-25 mm long, and more deeply divided above than below. Flowering late June to early August.

This species can be told from other red paintbrushes in its range by the covering of long, soft hairs (rather than stiff and straight), and the middle leaf segments that are almost as narrow as the lateral segments.

COMMENTS:
A well-defined regional endemic species. Known in MT from three collections in the Bitterroot Mtns. southwest of Darby.

7/88

CASTILLEJA COVILLEANA



CEANOTHUS HERBACEUS Raf.
New Jersey Tea

FAMILY: Rhamnaceae (Buckthorn Family)

SYNONYMS: C. HERBACEUS var. PUBESCENS (T. & G.) Shinners; C. OVATUS Desf.

USFS REGION 1 STATUS: MT - SENSITIVE.

USFWS STATUS: None.

MONTANA STATUS: Possibly Extirpated.

GLOBAL AND STATE RANK: G5/SH

GLOBAL DISTRIBUTION: Southern Canada and e. U.S., w. to the Great Plains.

MONTANA COUNTIES: Powder River.

PHYSIOGRAPHIC DISTRIBUTION:
Uplands between the Powder River and Tongue River basins.

NATIONAL FOREST(S): Custer.

HABITAT:
Grassy openings on mesic slopes in ponderosa pine forests; 1050-1220 m (3500-4000 ft).

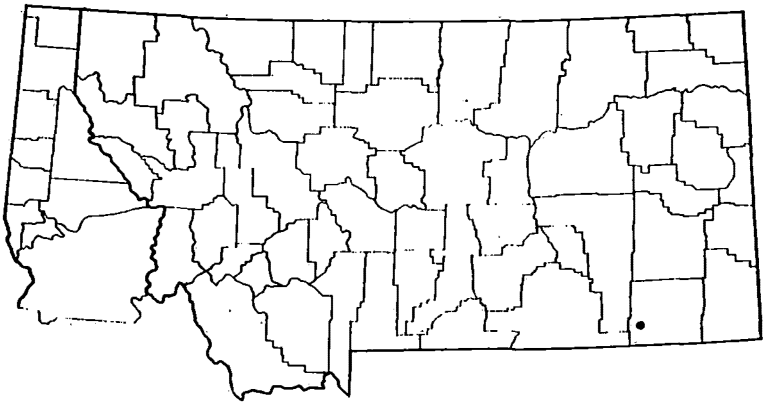
DESCRIPTION:
New Jersey Tea is a shrub with stems up to 1 m (39 in) tall. The broadly lance-shaped to elliptic leaves have toothed margins, are 2-6 cm (1-2 in) long, and are usually alternate on the stems. Upper leaf surfaces are mostly glabrous, while the lower are hairy. The flowers are borne in compact, hemisphere-shaped inflorescences at the tips of the stems. The small white flowers have 5 hood-shaped petals about 1.5 mm long. The fruits are 3-lobed capsules, 3-5 mm wide, with a smooth glossy surface. Flowering in June.

This is the only member of the Buckthorn Family in eastern Montana.

COMMENTS:
This species was collected once in Montana, but has not been reported again in the last 40 years.

7/88

CEANOTHUS HERBACEUS



CHRYSOSPLENIUM TETRANDRUM (Lund) Fries
Northern Golden-carpet

FAMILY: Saxifragaceae (Saxifrage Family)

SYNONYMS: None.

USFS REGION 1 STATUS: MT - SENSITIVE.

USFWS STATUS: None.

MONTANA STATUS: Sensitive.

GLOBAL AND STATE RANK: G4G5/S1

GLOBAL DISTRIBUTION: Circumpolar, south in North America to B.C., WA and CO.

MONTANA COUNTIES: Ravalli.

PHYSIOGRAPHIC DISTRIBUTION: Bitterroot Mtns.

NATIONAL FOREST(S):
Bitterroot; possibly occurring on Flathead, Kootenai, Lolo.

HABITAT:
Seeps, wet rock ledges and banks in the montane zone; 1220-1525 m (4000-5000 ft) in MT.

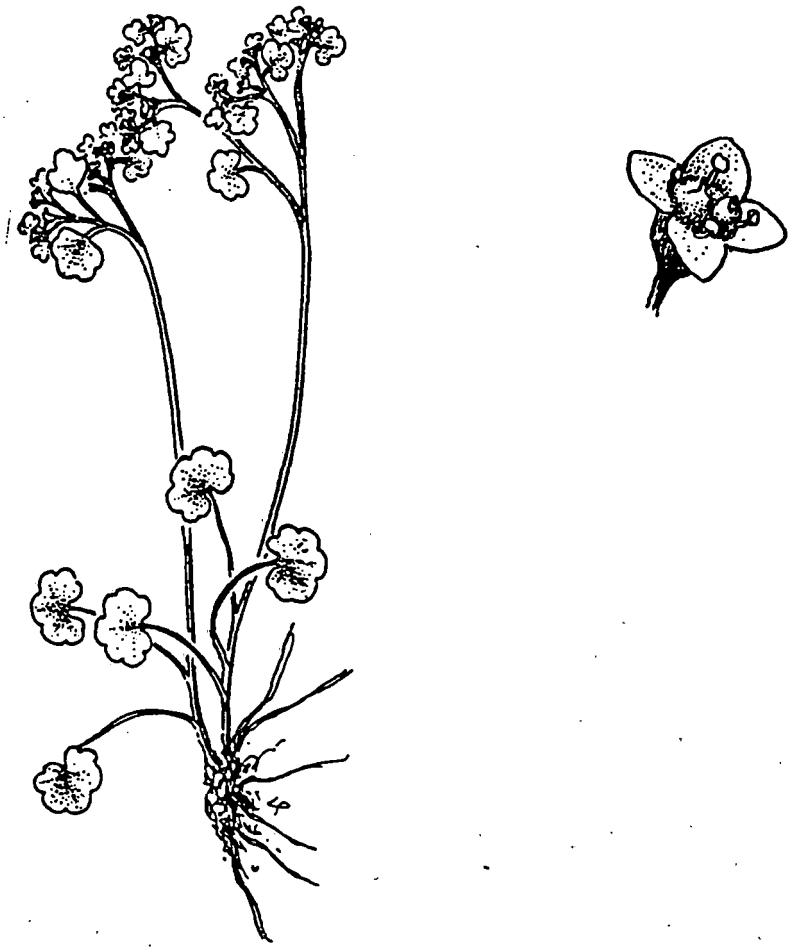
DESCRIPTION:
This is a small, creeping perennial, with branching stems up to 15 cm (6 in) long that root at the nodes and are erect at the tips. The alternate leaves are chiefly clustered at the base or near the tips of the stems. They are oval or kidney-shaped, 5-10 mm broad, with petioles up to 2 cm long, and are deeply scalloped on the margins. The herbage is glabrous. The small flowers are borne in loose, few flowered clusters at the ends of the stems. They lack petals, but have 4 green sepals that are approximately 1 mm long. The fruit is a two-lobed capsule, partially embedded in the calyx cup. Flowering in June and July.

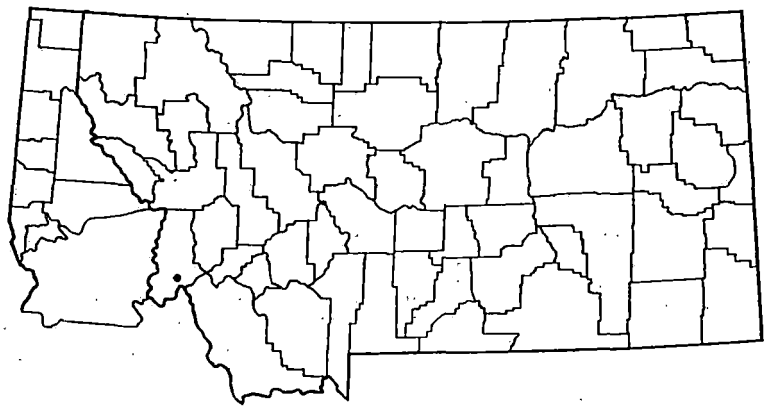
The stoloniferous habit and small apetalous flowers set this species apart from other saxifrages in its habitat.

COMMENTS:
Collected only once in Montana, this small plant may easily be overlooked.

7/88

CHRYSOSPLENIUM TETRANDRUM





CIRSIUM SUBNIVEUM Rydb.
Jackson's Hole Thistle

FAMILY: Asteraceae (Sunflower Family)

SYNONYMS: None.

USFS REGION 1 STATUS: MT - SENSITIVE.

USFWS STATUS: None.

MONTANA STATUS: Sensitive.

GLOBAL AND STATE RANK: G3G4/S1

GLOBAL DISTRIBUTION: Northeastern OR to e. NV, east to nw. WY and sw. MT.

MONTANA COUNTIES: Beaverhead, Madison.

PHYSIOGRAPHIC DISTRIBUTION: Gravelly, Ruby, and Tendoy Mtns.

NATIONAL FOREST(S): Beaverhead; possibly occurring on Gallatin.

HABITAT:
Sagebrush grassland, meadows and other open habitats in the mountains; 1825-2425 m (6000-8000 ft).

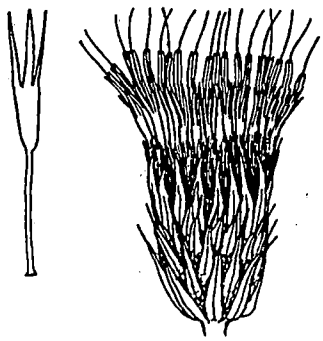
DESCRIPTION:
This perennial thistle has a taproot that often branches just below the ground. The stems are usually branched above, 30-70 cm (12-28 in) tall, and covered with long, white hairs (often becoming glabrate with age). The leaves have many spinetipped lobes and are sparsely woolly beneath, less hairy and greenish above. The flowering heads terminate the branches of the inflorescence, are 17-25 mm high, and are usually covered with long, tangled, white hairs. The bracts of the flower heads are tipped with an erect or spreading yellow spine 3-8 mm long. There are no ray flowers; the disk flowers are purple to pale pink in color. Flowering in July and August.

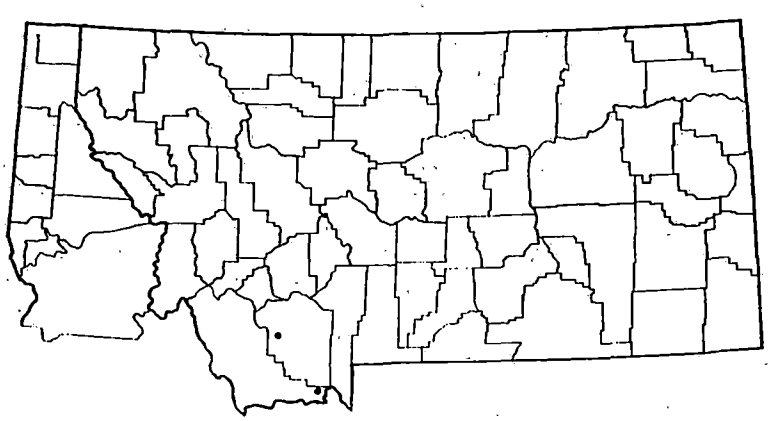
Cirsium is a difficult group, and the plants do not lend themselves to easy examination or collecting. This species can be distinguished by having the following combination of characters: flowering heads solitary at the branch tips, winged stems below the leaf attachments, and dense white hairs on the leaf undersides.

COMMENTS:
This species may be more common than current herbarium records indicate.

7/88

CIRSIUM SUBNIVEUM





CLARKIA RHOMBOIDEA Dougl.
Common Clarkia

FAMILY: Onagraceae (Evening Primrose Family)

SYNONYMS:
OENOTHERA RHOMBOIDEA Levl.; PHAEOSTOMA RHOMBOIDEA A. Nels.; C. GAUROIDES Dougl. ex Sweet.

USFS REGION 1 STATUS: MT - SENSITIVE.

USFWS STATUS: None.

MONTANA STATUS: Sensitive.

GLOBAL AND STATE RANK: G4/S1

GLOBAL DISTRIBUTION:
Southern B.C. southward to s. CA, e. to ID, w. MT, UT, and AZ.

MONTANA COUNTIES: Sanders.

PHYSIOGRAPHIC DISTRIBUTION: Bitterroot Mtns.

NATIONAL FOREST(S):
Lolo; potentially occurring on Bitterroot, Kootenai.

HABITAT:
Dry, open forests, to woods and slopes in the mountains; approximately 1830 m (6000 ft) in MT.

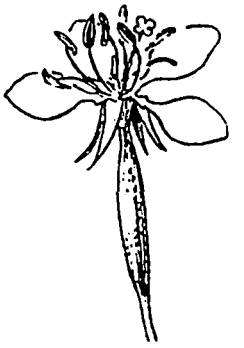
DESCRIPTION:
This annual clarkia has mostly unbranched stems 15-50 cm (6-20 in) tall. The few leaves are opposite, with petioles 1-3 cm long and lance-shaped to elliptic, entire margined blades 2-7 cm (1-3 in) long. The herbage is sparsely covered with short hairs. The few flowers are borne in a loose, narrow, nodding inflorescence terminating the stem. The four separate petals are spoon-shaped, 5-10 mm long, and rose-purple, often with purple dots. The ovary is club-shaped and below the point of attachment of the petals. The fruits are capsules 1.5-3 cm long, with a short beak at the tip. Flowering in July.

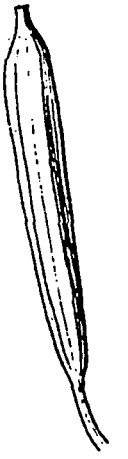
Clarkia rhomboidea is most easily confused with species of Epilobium, but can be distinguished by having seeds without a tuft of hairs at the tip.

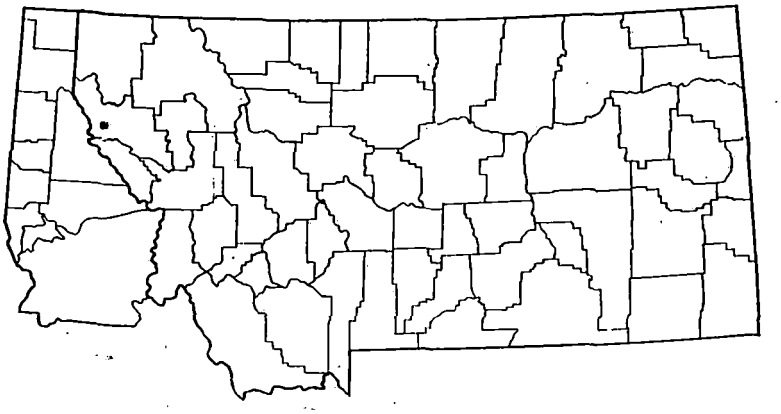
COMMENTS:
This species is peripheral in Montana, and is more common to the west and south.

7/88

CLARKIA RHOMBOIDEA







CLAYTONIA LANCEOLATA Pursh var. FLAVA (Nels.) Hitchc.
Yellow Springbeauty

FAMILY: Portulacaceae (Purslane Family)

SYNONYMS: C. AUREA A. Nels.; C. FLAVA A. Nels.

USFS REGION 1 STATUS: MT - SENSITIVE.

USFWS STATUS: C2

MONTANA STATUS: Sensitive.

GLOBAL AND STATE RANK: G5T1/S1

GLOBAL DISTRIBUTION: Northwest WY, sw. MT, e.-central ID.

MONTANA COUNTIES: Beaverhead, Deerlodge, Gallatin.

PHYSIOGRAPHIC DISTRIBUTION:
Southwestern mountains, including Pioneer Mtns.; Yellowstone region.

NATIONAL FOREST(S): Deerlodge, Beaverhead, Gallatin.

HABITAT:
Moist, mid- to high elevation montane meadows; 1675-3050 m (5500-10000 ft).

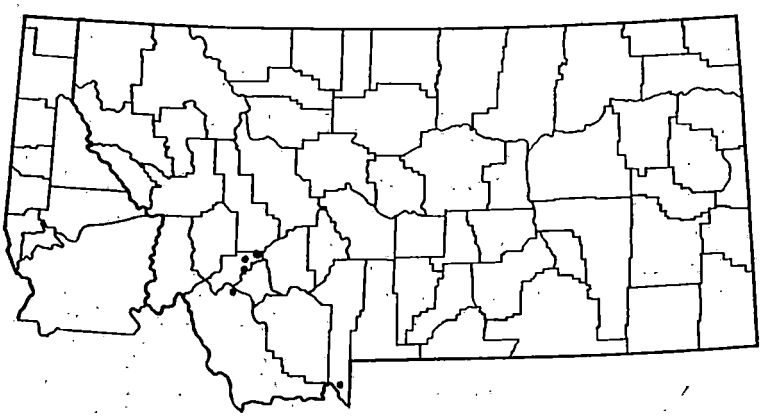
DESCRIPTION:
Yellow Springbeauty is a glabrous perennial, with 1-many stems up to 20 cm (8 in) tall arising from a starchy, globose bulb-like base (corm). There are 1-2, narrowly to broadly lance-shaped basal leaves up to 15 cm (6 in) long, and 1 pair of opposite stem leaves that are narrowly oblong or lance-shaped and without petioles. The 3-20 yellow flowers are borne on long (1-5 cm), nodding pedicels, mostly on one side of the main flower stem. The 5 petals are separate nearly to the base, and 7-12 mm long. There are 2 ovate sepals 2-5 mm long. The ovary has 3 styles and matures into a firm capsule about 4 mm long. Flowering from late April through early June.

This plant can be distinguished from other closely related members of the family by its yellow flowers and globose corms.

COMMENTS:
At many locations, this variety occurs in mixed populations with the white-flowered var. lanceolata, although two recently verified sites consist wholly of yellow-flowered individuals; the taxonomic status of this variety is currently being assessed.

7/88

CLAYTONIA LANCEOLATA var. FLAVA



CYPRIPEDIUM CALCEOLUS L. var. PARVIFLORUM (Salisb.) Fern.
Small Yellow Lady's-slipper

FAMILY: Orchidaceae (Orchid Family)

SYNONYMS:
C. PARVIFLORUM Salisb.; C. LUTEUM var. PARVIFLORUM Raf.; CYPRIPEDILUM PARVIFLORUM Stein; C. HIRSUTUM var. PARVIFLORUM Rolfe; C. BULBOSUM var. PARVIFLORUM Farw.; CALCEOLUS PARVIFLORUS Nieuwl.

USFS REGION 1 STATUS: MT - SENSITIVE; ID - WATCH.

USFWS STATUS: None.

MONTANA STATUS: Sensitive.

GLOBAL AND STATE RANK: G4T3/S2

GLOBAL DISTRIBUTION:
B.C. to WA and OR, e. of the Cascade crests, to ID, ND and eastern US.

MONTANA COUNTIES:
Flathead, Granite, Lake, Lewis & Clark, Lincoln, Missoula, Stillwater, Teton.

PHYSIOGRAPHIC DISTRIBUTION: Western and s.-central Mtns., Swan Valley.

NATIONAL FOREST(S):
Flathead; potentially occurring on Kootenai, Lewis & Clark, and Lolo.

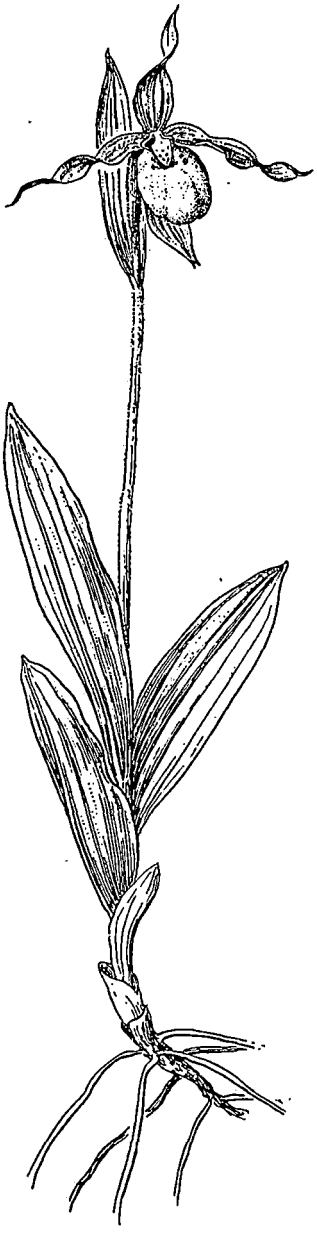
HABITAT:
Bogs, damp mossy woods, seepage areas, and moist forest-meadow ecotones, at mid-elevations; 915-1890 m (3000-6200 ft).

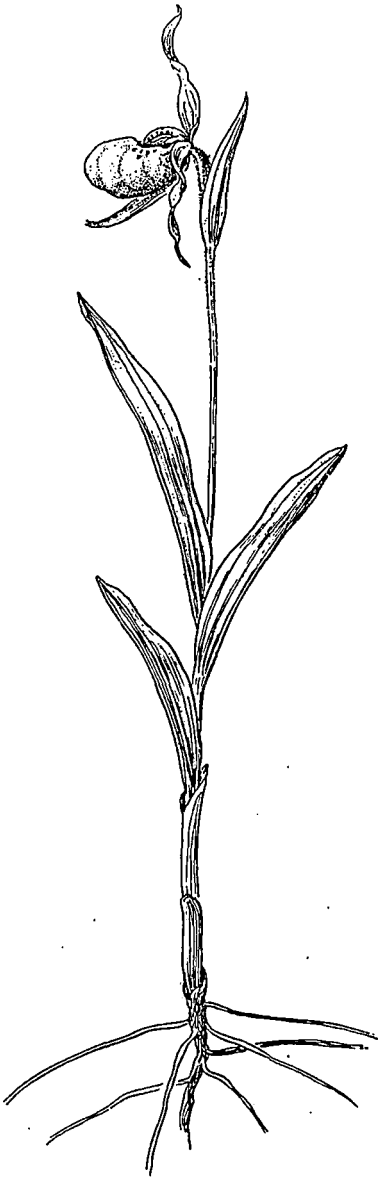
DESCRIPTION:
This species of lady's-slipper has leafy stems 15-40 cm (6-16 in) tall from a short rhizome. The elliptic leaves are 6-17 cm (2-7 in) long, and sheath the stem. The foliage is lightly pubescent and usually glandular. The 1-2 yellow flowers are subtended by an erect leafy bract, often longer than the inflorescence. The narrow sepals are up to 4 cm long, and wavy-margined or slightly twisted. One petal is strongly pouch-shaped and often purple-dotted. The other 2 petals are united into one that is similar to the sepals but slightly longer. The fruit is an elliptic capsule bearing many thousands of tiny seeds. Flowering late May and June.

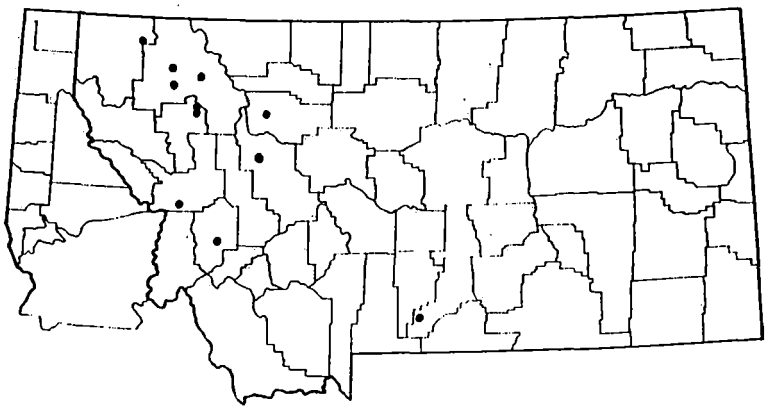
This is is our only yellow-flowered lady's-slipper.

COMMENTS:
A widespread, but sparsely occurring, variety. It is often found in or near habitats which are susceptible to timber harvesting.

CYPRIPEDIUM CALCEOLUS var. PARVIFLORUM







CYPRIPEDIUM PASSERINUM Richards.
Sparrow's-egg Lady's-slipper

FAMILY: Orchidaceae (Orchid Family)

SYNONYMS: CYPRIPEDILUM PASSERINUM Pfitz.

USFS REGION 1 STATUS: MT - SENSITIVE.

USFWS STATUS: None.

MONTANA STATUS: Sensitive.

GLOBAL AND STATE RANK: G4G5/S1

GLOBAL DISTRIBUTION:
AK and Yukon to Hudson Bay and Quebec, s. to se. B.C., n. MT, and to the region of Lake Superior.

MONTANA COUNTIES: Flathead, Lewis & Clark, Powell.

PHYSIOGRAPHIC DISTRIBUTION:
Glacier National Park, Front Range Mtns., Bob Marshall Wilderness.

NATIONAL FOREST(S):
Flathead, Lewis & Clark; possibly occurring on Helena, Kootenai, Lolo.

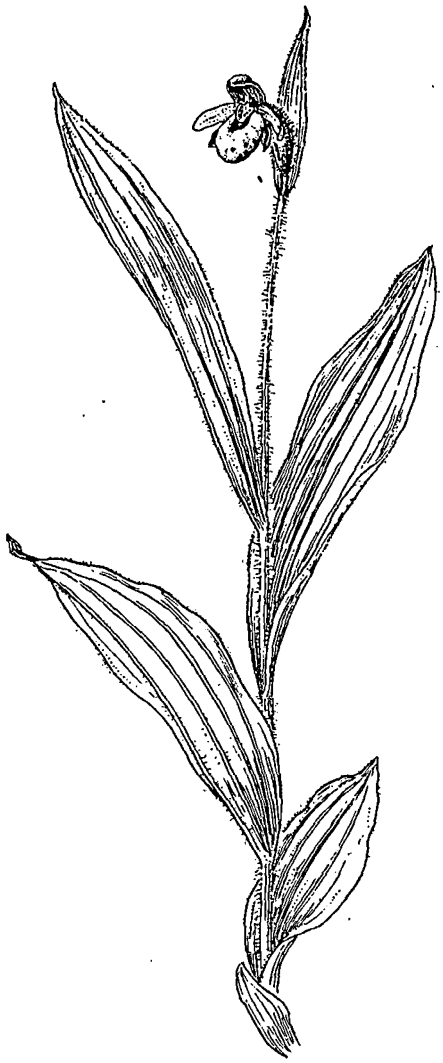
HABITAT:
Mossy, moist to springy places in coniferous forests, often on calcareous substrates; 1280-1615 m (4200-5300 ft).

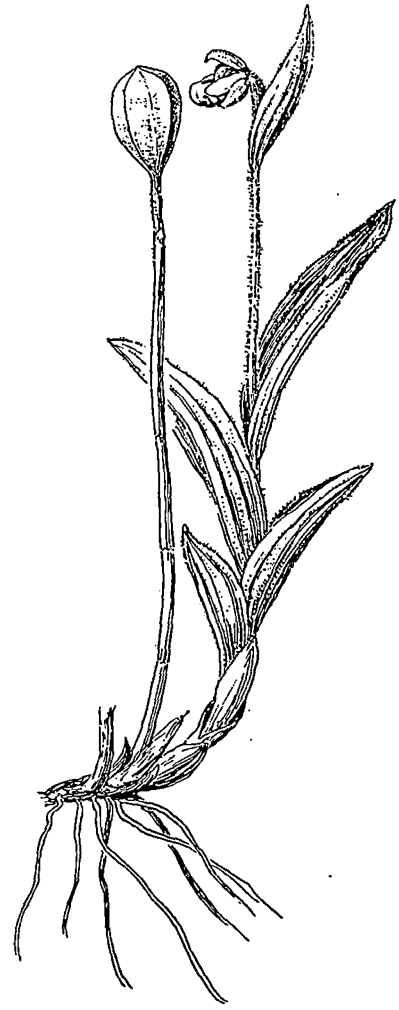
DESCRIPTION:
The Sparrow's-egg lady's-slipper has leafy stems up to 35 cm (14 in) high from slender, creeping rhizomes. The 3-5 broadly lance-shaped leaves are up to 15 cm (6 in) long, and clasp the stem. The herbage is covered with long, soft hairs and is usually somewhat sticky. The one or two flowers are subtended by a leafy bract which is longer than the inflorescence. The sepals are green and 10-16 mm long, the upper one longer than the lower two. The petals are white, the lower one is pouchlike with purple spots on the inside, and the other two resemble the sepals but are shorter. The erect capsule is ovoid and bears thousands of tiny seeds. Flowering in late June and July.

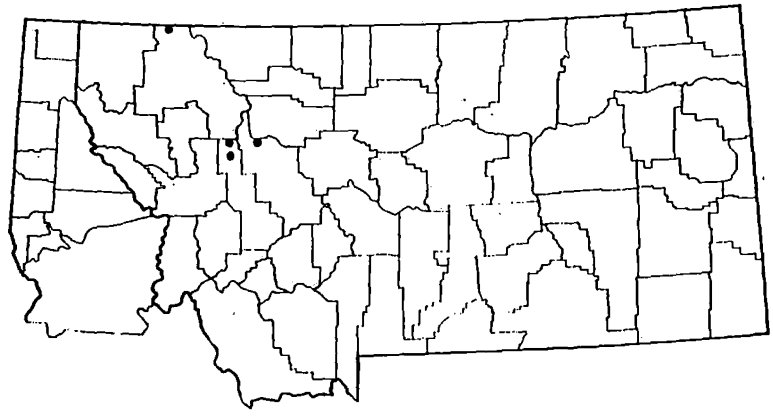
This species can be distinguished from our other white lady's-slipper (C. montanum) by the sepals that are shorter than the slipper-like petal, and which are not wavy or twisted.

COMMENTS:
The only known sites for this orchid in the lower 48 United States are in Montana. One of these three known locations is in the Front Range, where oil and gas exploration is a potential threat.

CYPRIPEDIUM PASSERINUM







DROSERA LINEARIS Goldie
Linear-leaved Sundew

FAMILY: Droseraceae (Sundew Family)

SYNONYMS: None.

CITATION:
Gleason, H.A. 1952. The New Britton and Brown Illustrated Flora of the Northeastern United States and adjacent Canada, Vol. 2:252-253. The New York Botanic Garden.

USFS REGION 1 STATUS: MT - SENSITIVE.

USFWS STATUS: None.

MONTANA STATUS: Sensitive.

GLOBAL AND STATE RANK: G4/S1

GLOBAL DISTRIBUTION: Boreal Canada, s. to ME, WI, MT.

MONTANA COUNTIES: Lewis & Clark.

PHYSIOGRAPHIC DISTRIBUTION: Southern Scapegoat Mtns.

NATIONAL FOREST(S): Helena; possibly occurring on Flathead, Lewis & Clark.

HABITAT:
Sphagnum bogs, at mid-elevations in the mountains; 1830-1840 m (6000-6030 ft) in MT.

DESCRIPTION:
This is a small, perennial herb with leafless, glabrous stems 6-13 cm (2-5 in) tall. The linear leaf blades are 2-5 cm (1-2 in) long and approximately 2 mm wide. The petioles are flat and 3-7 cm (1-3 in) long. The blades are covered with long, purple, gland-tipped hairs which trap insects. The 1-4 flowers are borne in a narrow, open inflorescence at the tip of the stem. The 5 egg-shaped, white petals are approximately 6 mm long, and the sepals are 4-5 mm long. The fruit is a small capsule with numerous seeds. Flowering in July and August.

This species is very difficult to distinguish from the more common D. anglica. The leaves of D. linearis are more linear and the seeds are rounded on the ends rather than tapered to a point.

COMMENTS:
The only known populations of this species in the western United States are on the Helena National Forest. It may be hybridizing with another closely related species, Drosera anglica, at this location (Indian Meadows).

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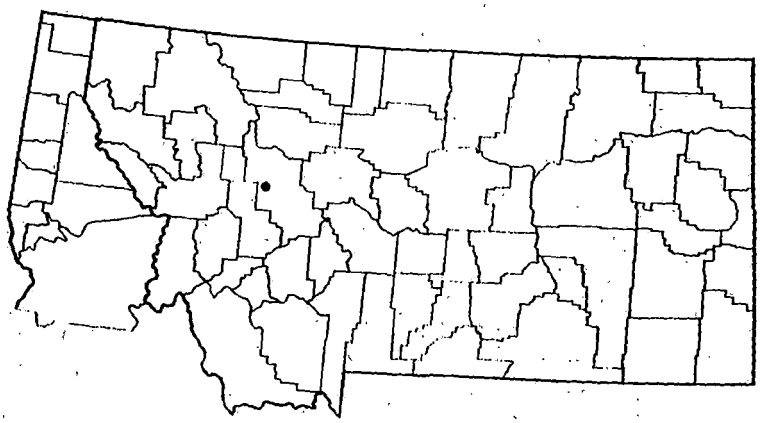
DROSERA LINEARIS



EPIPACTIS GIGANTEA Dougl.
Giant Helleborine

FAMILY: Orchidaceae (Orchid Family)

SYNONYMS:
LIMODORUM GIGANTEUM Kuntze; PERAMIUM GIGANTEUM Coult.; SERAPIAS GIGANTEA Eat.; HELLEBORINE GIGANTEA Druce; AMESIA GIGANTEA Nels. & Macbr.

USFS REGION 1 STATUS: MT - SENSITIVE; ID - WATCH.

USFWS STATUS: None.

MONTANA STATUS: Threatened.

GLOBAL AND STATE RANK: G4/S1

GLOBAL DISTRIBUTION:
B.C. s. to Baja CA, and in most of w. U.S. to the Rocky Mtns. and s. to n. Mexico.

MONTANA COUNTIES:
Carbon, Flathead, Granite, Lake; historically known from the Sun River Canyon (Lewis & Clark or Teton).

PHYSIOGRAPHIC DISTRIBUTION:
Pryor Mtn. foothills, mtns. west of Continental Divide, and possibly Front Range Mtns.

NATIONAL FOREST(S):
Flathead; possibly occurring on all nine other National Forests in MT.

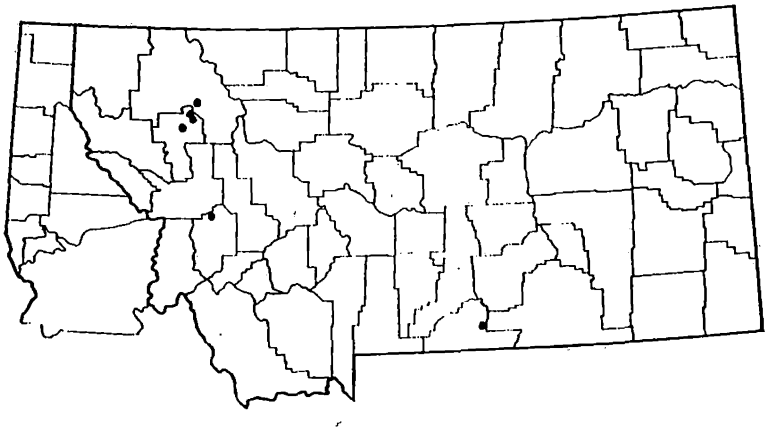
HABITAT:
Streambanks, lake margins, and around springs and seepage areas, often near thermal waters; 885-1250 m (2900-4100 ft).

DESCRIPTION:
Giant helleborine is a large perennial herb, with leafy stems 30-100 (1-3 ft) tall from short rhizomes. The leaves are without petioles and up to 20 cm (8 in) long. The lower are ovate; the upper are lance-shaped. The herbage is rough to the touch or smooth and glabrous. The numerous flowers are borne singly in a long, narrow, leafy-bracted inflorescence at the top of the stems. The lance-shaped sepals are green with brownish stripes and approximately 15 mm long. The two upper petals are shorter and broader than the sepals. The lower petal is sac-like, and longer and more reddish than the sepals. The nodding capsule is elliptic and bears many thousands of tiny seeds. Flowering late June through August.

This is one of our most distinctive orchids, and is not easily confused with any other species.

COMMENTS:
The only native member of its genus in Canada and the United States. Some sites in Montana appear to have been extirpated since their discovery. It is currently known from five sites in the state.

EPIPACTIS GIGANTEA



ERIGERON ASPERUGINEUS (Eat.) Gray
Rough Fleabane

FAMILY: Asteraceae (Sunflower Family)

SYNONYMS: None.

USFS REGION 1 STATUS: MT - SENSITIVE.

USFWS STATUS: None.

MONTANA STATUS: Sensitive.

GLOBAL AND STATE RANK: G4/S1

GLOBAL DISTRIBUTION: Central ID, ne. NV and sw. MT.

MONTANA COUNTIES: Beaverhead.

PHYSIOGRAPHIC DISTRIBUTION: Lima Peaks (Beaverhead Mtns.).

NATIONAL FOREST(S): Beaverhead; possibly occurring on Bitterroot.

HABITAT:
Open soil and scree near or above timberline; 2425-2750 m (8000-9000 ft).

DESCRIPTION:
Rough fleabane is a small perennial herb, 2-20 cm (1-8 in) tall, with 1-few stems from a slender taproot. The basal leaves are up to 10 cm (4 in) long, and have a broadly lance-shaped to nearly round blade and a long petiole. The few stem leaves are smaller and reduced upwards. The herbage is densely covered with short spreading hairs. The daisy-like, flowering heads are solitary (occasionally 2) at the ends of the stalks. The involucral bracts are 5-9 mm long and covered with glands and spreading hairs. The 10-25 deep blue or violet rays that compose the "petals" of the flowering head are 5-10 mm long. The disk corollas in the center of the head are 4-6 mm long. The "seeds" (achenes) have 20-30 bristles (pappus) at the top. Flowering July and August.

Erigeron is a large and very difficult genus. Many species, including E. tweedyi, E. caespitosus, E. gracilis, and E. rydbergii can be confused with E. asperugineus. A technical key should be consulted in order to make a determination.

COMMENTS:
The one known Montana population occurs in calcareous soil, in an area otherwise dominated by crystalline rock.

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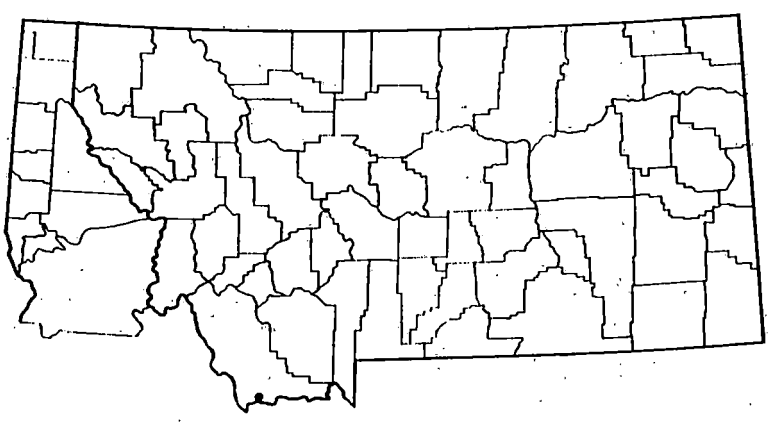
ERIGERON ASPERUGINEUS



ERIGERON EVERMANNII Rydb.
Evermann's Fleabane.

FAMILY: Asteraceae (Sunflower Family)

SYNONYMS: None.

USFS REGION 1 STATUS: MT - SENSITIVE.

USFWS STATUS: None.

MONTANA STATUS: Sensitive.

GLOBAL AND STATE RANK: G4G5/S1

GLOBAL DISTRIBUTION: Central ID to sw. MT.

MONTANA COUNTIES: Ravalli.

PHYSIOGRAPHIC DISTRIBUTION: Bitterroot Mtns.

NATIONAL FOREST(S): Bitterroot; possibly occurring on Beaverhead.

HABITAT:
Shifting talus slopes and dry, rocky meadows in the high mountains; 2620-3050 m (8600-10000 ft).

DESCRIPTION:
This dwarf perennial species has stems up to 10 cm (4 in) tall from a branched rootstock, and a long, deep-seated taproot. The glabrous basal leaves are up to 4 cm (2 in) long, spoon-shaped, and rounded at the tip. The stem leaves are greatly reduced or lacking. The flowering heads are solitary at the ends of the stems. The rays that compose the "petals" of the flowering head are 6-10 mm long, and white or occasionally light blue. The involucral bracts are 5-8 mm long, spreading hairy, and usually glandular. The "seeds" (achenes) have 25-35 unequal-length bristles (pappus) at the top. Flowering July and August.

Erigeron is a very large and difficult genus. The almost complete absence of stem leaves and the shifting talus habitat are good distinguishing characters for E. evermannii.

COMMENTS:
A regional endemic species in a large, taxonomically complex genus. Currently known from two sites in Montana.

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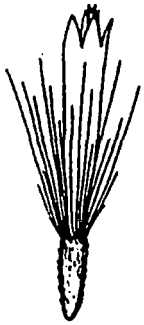
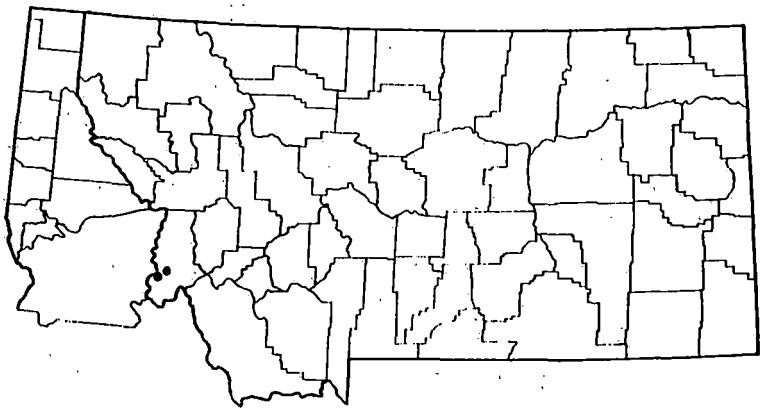
ERIGERON EVERMANNII





ERIGERON FLAGELLARIS Gray
Trailing Fleabane

FAMILY: Asteraceae (Sunflower Family)

SYNONYMS: None.

USFS REGION 1 STATUS: MT - SENSITIVE.

USFWS STATUS: None.

MONTANA STATUS: Threatened.

GLOBAL AND STATE RANK: G4/S1

GLOBAL DISTRIBUTION:
WY to NV, s. to TX and AZ; disjunct in nw. MT, s. B.C. and Alberta.

MONTANA COUNTIES: Lewis & Clark.

PHYSIOGRAPHIC DISTRIBUTION: Front Range Mtns.

NATIONAL FOREST(S):
Lewis & Clark; possibly occurring on Beaverhead, Deerlodge, Helena.

HABITAT:
Open soil in disturbed meadows in the lower montane zone; approximately 1525 m (5000 ft).

DESCRIPTION:
This is a taprooted biennial or short-lived perennial species, with trailing stems rooting at the leaf nodes, and erect stems up to 20 cm (8 in) tall. The basal leaves are lance-shaped, broadest above the middle, and up to 5 cm (2 in) long, including the petiole. The stem leaves are linear and 1-3 cm long. The herbage is covered with appressed hairs. The flowering heads are solitary at the ends of the stalks. The involucral bracts are 3-5 mm long, and usually covered with fine hair and glands. The 50-100 rays that compose the "petals" of the flowering head are white to pink and 5-10 mm long. The "seeds" (achenes) have 10-15 fine bristles at the top. Flowering late June through August.

The leafy stolons distinguish this species from all other members of the genus.

COMMENTS:
This species tends to be weedy in the main part of its range. The single known population in Montana is found in the Front Range, where oil and gas exploration is a potential threat.

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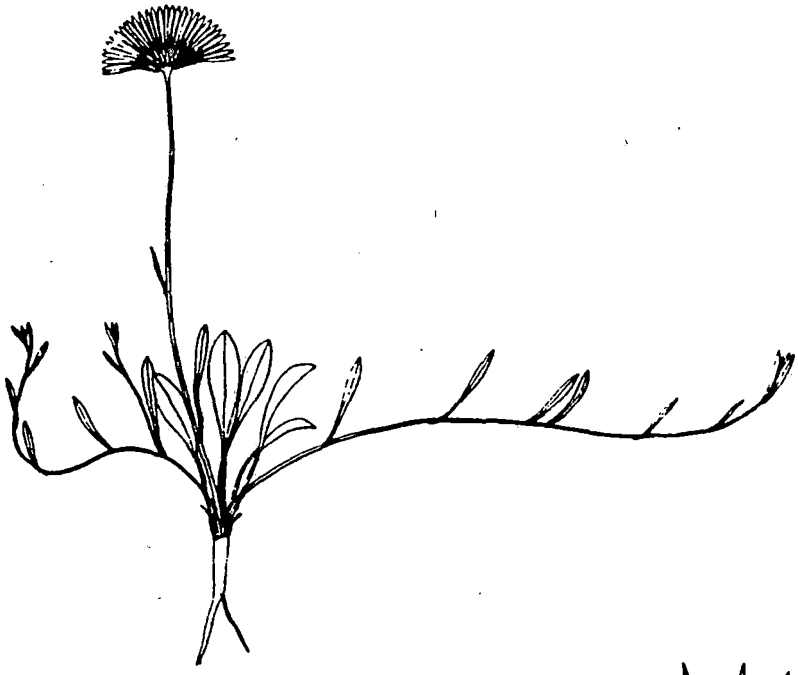
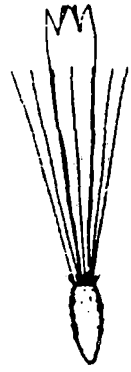
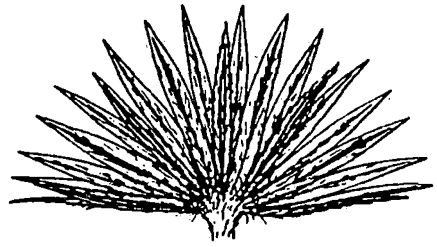
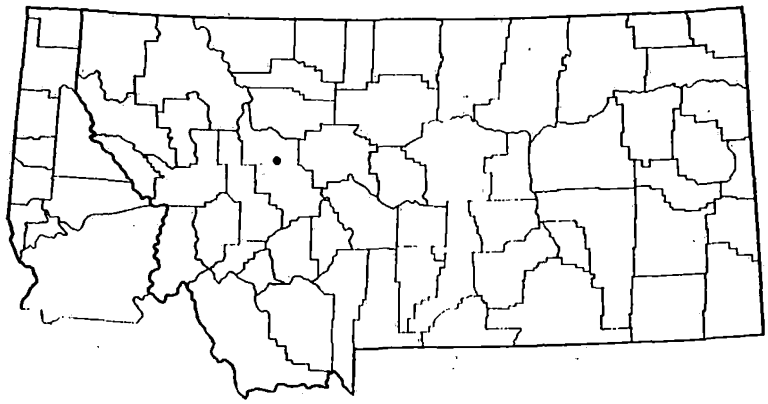
ERIGERON FLAGELLARIS









EUPATORIUM OCCIDENTALE Hook.
Western Boneset

FAMILY: Asteraceae (Sunflower Family)

SYNONYMS: E. OCCIDENTALE var. DECEMPLEX A. Nels.

USFS REGION 1 STATUS: MT - SENSITIVE; N. ID - NONE.

USFWS STATUS: None.

MONTANA STATUS: Sensitive.

GLOBAL AND STATE RANK: G4/S1

GLOBAL DISTRIBUTION: Central WA, ID, and w. MT, s. to CA and UT.

MONTANA COUNTIES: Mineral, Ravalli.

PHYSIOGRAPHIC DISTRIBUTION: Bitterroot Mtns.

NATIONAL FOREST(S):
Bitterroot, Lolo; possibly occurring on Beaverhead, Kootenai.

HABITAT:
Rocky places at a wide range of elevations; 1950-2135 m (6400-7000 ft).

DESCRIPTION:
Western boneset is a rhizomatous perennial herb with clustered stems, often woody at the base, and 15-70 cm (6-28 in) tall. The alternate leaves are triangular or ovate in outline and 2-7 cm (1-3 in) long with toothed margins. The lower leaves are reduced and early deciduous. The lower leaf surfaces have small unstalked glands. The flowering heads are borne in an open, branched inflorescence. The involucral bracts are 3-5 mm long and mostly all equal in length. The heads lack ray flowers. There are 9-21 purple or pink disk flowers in each head. The top of the "seed" (achene) bears a tuft of numerous fine bristles. Flowering in August.

This species could be confused with Brickellia grandiflora or Saussurea americana, but both can be distinguished from E. occidentale by having the involucral bracts in many series of different lengths.

COMMENTS: A species occurring peripherally in western MT.

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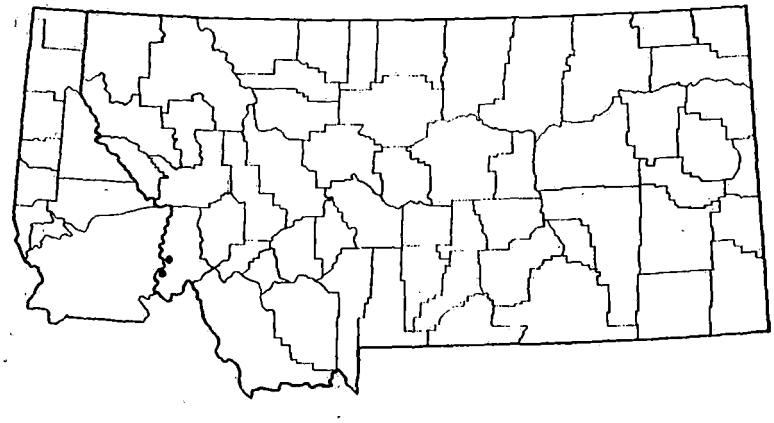
EUPATORIUM OCCIDENTALE



GEOCAULON LIVIDUM (Richards.) Fern.
Northern Bastard Toad-flax

FAMILY: Santalaceae (Sandalwood Family)

SYNONYMS: COMANDRA LIVIDA Richards.

USFS REGION 1 STATUS: MT - SENSITIVE.

USFWS STATUS: None.

MONTANA STATUS: Sensitive.

GLOBAL AND STATE RANK: G4/S1

GLOBAL DISTRIBUTION:
AK to Labrador, and south to n. WA, n. ID, nw. MT, MI, and NY.

MONTANA COUNTIES: Flathead, Lake, Lincoln.

PHYSIOGRAPHIC DISTRIBUTION:
Mountainous regions in the northwest part of Montana, and Swan Valley.

NATIONAL FOREST(S): Flathead, Kootenai; possibly occurring on Lolo.

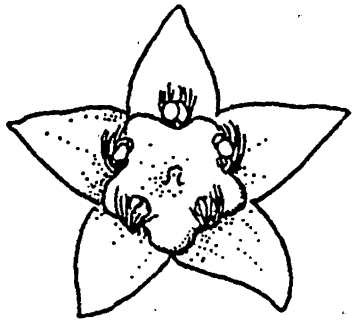
HABITAT:
Moist spruce forests at lower elevations in the montane zone, often in areas bordering boggy sites; 900-1000 m (3000-3300 ft) in MT.

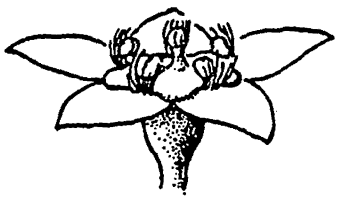
DESCRIPTION:
This herbaceous species has widely spreading rhizomes and clumps of 1-several stems usually 10-20 cm (4-8 in) tall. The alternate leaves are broadly lance-shaped to narrowly ovate, short-petiolate, and 1-4 cm long. Lower stem leaves are absent. The herbage is glabrous and leathery-appearing. The inconspicuous flowers are borne in groups of 3 on short stalks in the axils of the middle leaves. The flowers have 5 greenish, trangular sepals about 1.5 mm long. Petals are lacking. Only the middle flower of each cluster of three flowers forms fruit, a fleshy red berry 5-10 mm in diameter. Flowering in June, fruiting in July and August.

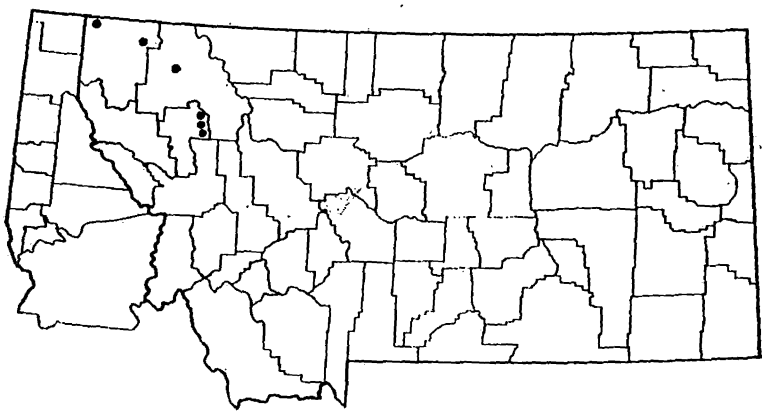
This plant is very inconspicuous and is most easily found when in fruit. It often occurs with bunchberry (Cornus canadensis) and twinflower (Linnaea borealis).

COMMENTS:
Although this inconspicuous species may be more common than herbarium records indicate, known populations are small, and many sites are threatened by timber harvest activity.

GEOCAULON LIVIDUM







GRINDELIA HOWELLII Steyermark
Howell's Gumweed

FAMILY: Asteraceae (Sunflower Family)

SYNONYMS: None.

USFS REGION 1 STATUS: MT - SENSITIVE; N. ID - SENSITIVE.

USFWS STATUS: C2

MONTANA STATUS: Watch List.

GLOBAL AND STATE RANK: G3/S3

GLOBAL DISTRIBUTION: Northern ID, w.-central MT.

MONTANA COUNTIES: Missoula, Powell.

PHYSIOGRAPHIC DISTRIBUTION: Blackfoot and Clearwater river drainages.

NATIONAL FOREST(S):
Lolo, St. Joe; possibly occurring on Flathead, Kootenai.

HABITAT:
Various disturbed and natural habitats, including roadsides, grazed pastures, pine plantations, forest openings, river terraces, and native grasslands; 760-1490 m (2500-4880 ft).

DESCRIPTION:
Howell's gumweed is a short-lived perennial with stems up to 90 cm (35 in) tall that are woody at the base, and clustered on a taproot. The basal leaves are lanceshaped, broadest toward the tip, and up to 20 cm (8 in) long. The clasping stem leaves are reduced in size and entire-margined, or with shallow, ill-defined teeth. The herbage is resinous and glandular. The stem is glandular-haired, and usually also has some long, soft hairs. The flowering heads are borne in a terminal, open, leafy inflorescence. The numerous, narrow, involucral bracts are resinous and have green, recurved tips. The yellow rays (petal-like outer flowers) are about 1 cm long. The heads are 8-25 mm across the top (not including the rays). The "seeds" (achenes) are flat on the top, with a few stiff bristles that are easily removed. Flowering in July and August.

This species is very similar to G. nana and G. squarrosa. It is distinguished by having glandular, and often hairy rather than glabrous, stems.

COMMENTS:
This species is tolerant of disturbance; however, numerous populations are small and possibly ephemeral, and monitoring will be necessary to determine overall trends. Most sites in Montana are located on private timber lands.

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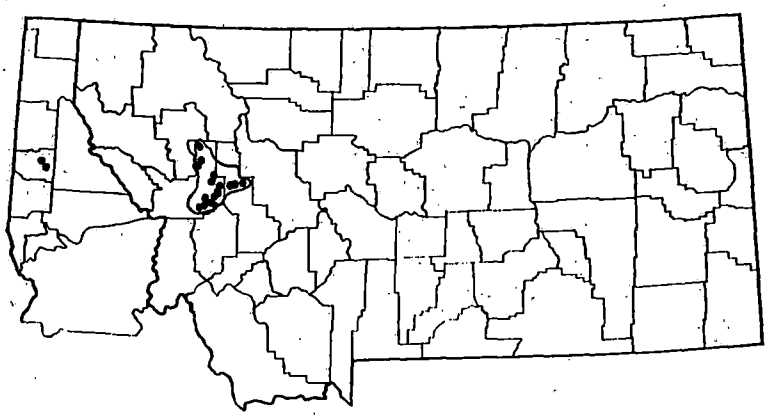
GRINDELIA HOWELLII



HAPLOPAPPUS MACRONEMA Gray var. MACRONEMA
Discoid Goldenweed

FAMILY: Asteraceae (Sunflower Family)

SYNONYMS:
MACRONEMA DISCOIDEUM Nutt.; ASTER MACRONEMA Kuntze; BIGELOVIA MACRONEMA Jones; HAPLOPAPPUS DISCOIDEUS Hall & Hall; MACRONEMA LINEARE Rydb.; HAPLOPAPPUS MACRONEMA ssp. LINEARIS Hall.

USFS REGION 1 STATUS: MT - SENSITIVE.

USFWS STATUS: None.

MONTANA STATUS: Sensitive.

GLOBAL AND STATE RANK: G4/S1

GLOBAL DISTRIBUTION:
Central ID, sw. MT, and w. WY, to CO, UT, se. OR, and CA.

MONTANA COUNTIES: Beaverhead.

PHYSIOGRAPHIC DISTRIBUTION: Pioneer Mtns.

NATIONAL FOREST(S):
Beaverhead; possibly occurring on Bitterroot, Deerlodge, Gallatin.

HABITAT:
Rocky, open or sparsely wooded slopes, often in coarse talus, at high elevations in the mountains, often above timberline; 2330 m (7640 ft) in MT.

DESCRIPTION:
This is a low, rounded shrub with leafy stems 15-40 cm (6-16 in) tall. The leaves are lance-shaped, widest above the middle, 1-3 cm long, and wavy-margined. The leaves and inflorescence are glandular, while the stem is densely white-hairy. Flowering heads are borne in clusters of 1-3 at the ends of branches. The glandular-hairy involucral bracts are 8-15 mm long; the outer are broader and more leafy than the inner. Ray flowers are lacking. The 10-25 disk flowers are yellow and 8-11 mm long. The "seeds" (achenes) have numerous fine bristles on top. Flowering in late July and August.

The more common H. suffruticosus does not have densely white-hairy stems.

COMMENTS:
The only report of this species in MT is from a specimen collected in 1920, near Storm Peak in the east Pioneer Mtns. Field surveys are needed to determine the status of the species in Region 1.

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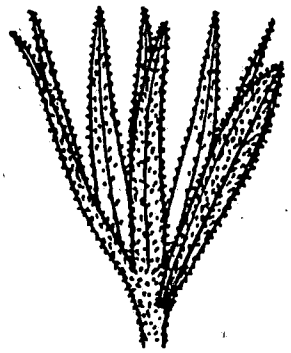
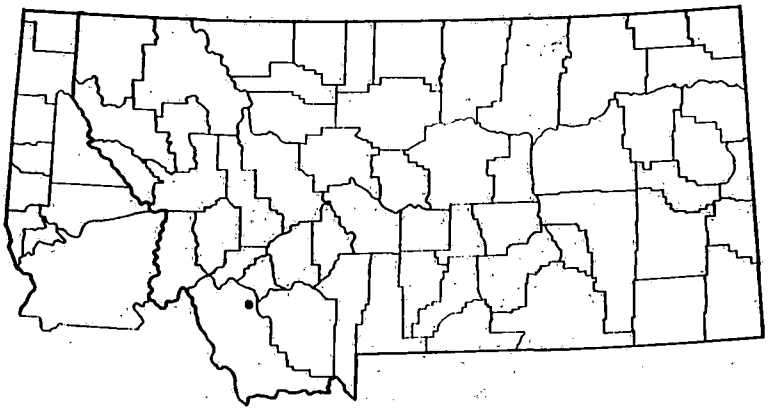
HAPLOPAPPUS MACRONEMA var. MACRONEMA





HOWELLIA AQUATILIS Gray
Water Howellia

FAMILY: Campanulaceae (Bellflower Family)

SYNONYMS: None.

USFS REGION 1 STATUS: MT - SENSITIVE; N. ID - WATCH.

USFWS STATUS: C2

MONTANA STATUS: Threatened.

GLOBAL AND STATE RANK: G2/S1

GLOBAL DISTRIBUTION:
Currently known extant in WA and nw. MT; historically known from OR, CA, and ID.

MONTANA COUNTIES: Lake, Missoula.

PHYSIOGRAPHIC DISTRIBUTION: Swan Valley.

NATIONAL FOREST(S): Flathead; possibly occurring on Lolo, Kootenai.

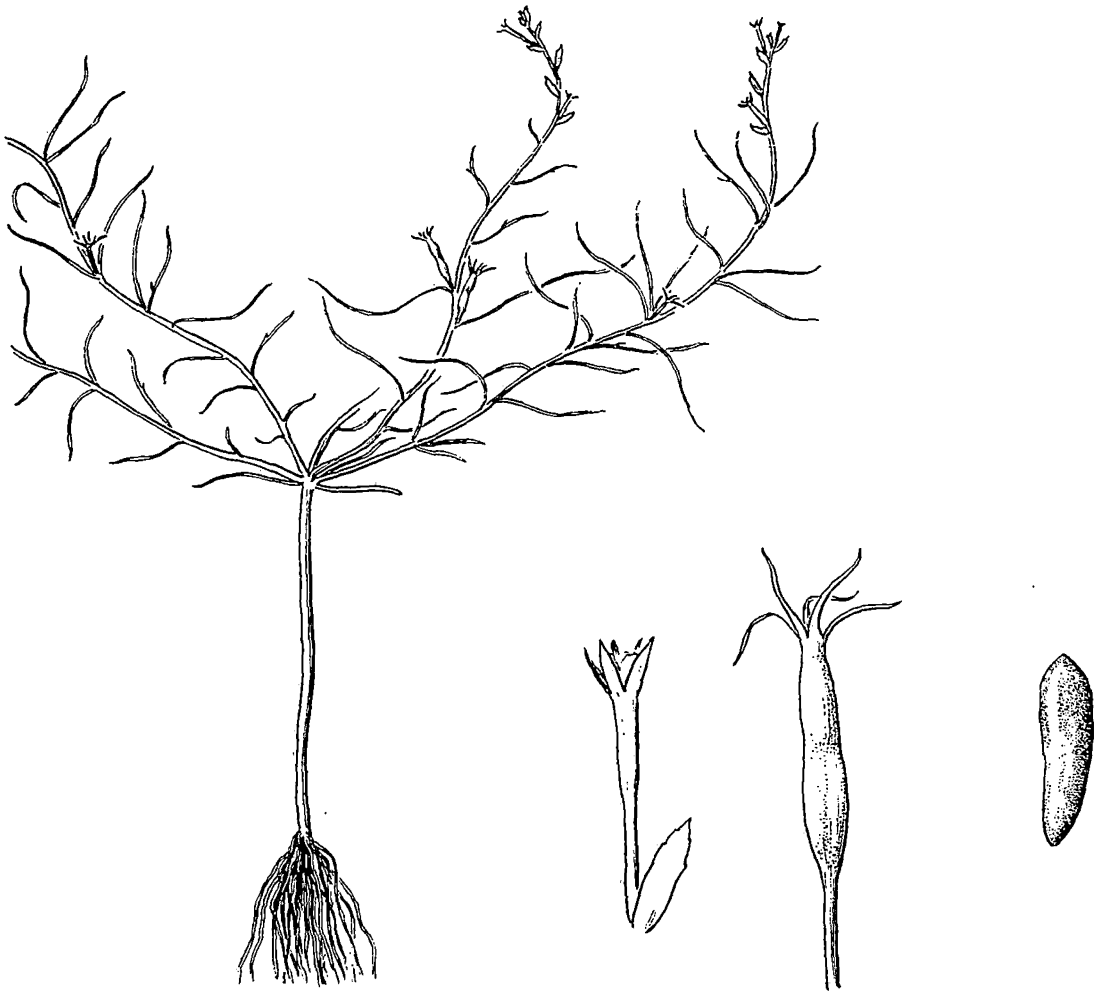
HABITAT:
Vernal glacial pothole ponds and oxbow sloughs which dry by late summer; often associated with Carex vesicaria, Equisetum fluviatile, Sium suave; 945-1350 m (3100-4420 ft) in MT.

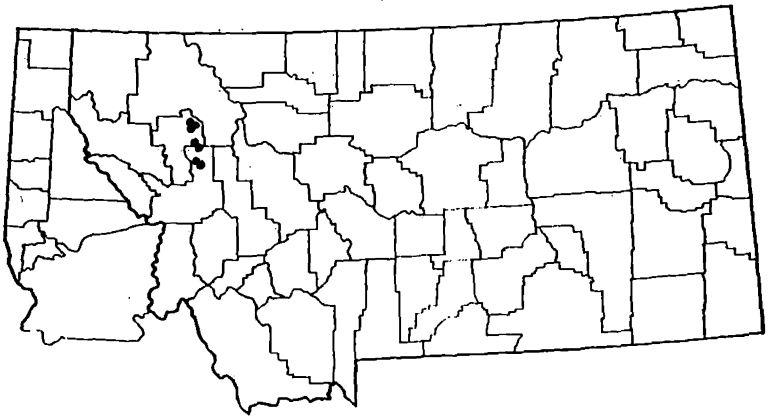
DESCRIPTION:
Howellia is a glabrous, much-branched, annual, aquatic herb with fragile, submerged and floating stems up to 100 cm (39 in) tall. The simple, alternate (occasionally opposite or whorled) leaves are narrowly linear, 1-5 cm long, and entire-margined. Beneath the surface of the water, small flowers that produce seed without opening are solitary in the leaf axils. Once the stems reach the surface, small, white flowers are borne in a narrow, terminal, leafy-bracted inflorescence. The white corolla is 2-3 mm long. The fruit, which forms below the attachment of the petals, is a capsule 1-2 cm long, containing elongate seeds up to 2-4 mm long. Flowering on the surface of the water, or submerged, in July and early August.

Vegetatively, this species resembles a small-leaved pondweed (Potamogeton) or a water starwort (Callitriche), but the flowers in these two groups lack petals, and they have much smaller seeds. During spring and early summer it also resembles water-parsnip (Sium suave), however, the leaves on this plant are in a basal rosette.

COMMENTS:
Annual aquatic species, which undergoes yearly fluctuations in population size. In MT, known from seven areas in the Swan Valley, where habitat adjacent to approximately half of the populations has been disturbed by timber harvesting and road construction.

HOWELLIA AQUATILIS





KOBRESIA MACROCARPA Clokey ex Mack.
Large-fruited Kobresia

FAMILY: Cyperaceae (Sedge Family)

SYNONYMS: K. SIBIRICA (Turcz. ex Ledeb.) Boeckl.

CITATION:
Mackenzie, K.K. 1940. North American Cariceae, Vol. 2:535. The New York Botanic Garden.

USFS REGION 1 STATUS: MT - SENSITIVE.

USFWS STATUS: None.

MONTANA STATUS: Sensitive.

GLOBAL AND STATE RANK: G5/S1

GLOBAL DISTRIBUTION:
Arctic Asia and North America, including AK, disjunct south to sc. MT, central CO, and Park County, WY.

MONTANA COUNTIES: Carbon.

PHYSIOGRAPHIC DISTRIBUTION: Beartooth Mtns.

NATIONAL FOREST(S): Custer; possibly occurring on Gallatin.

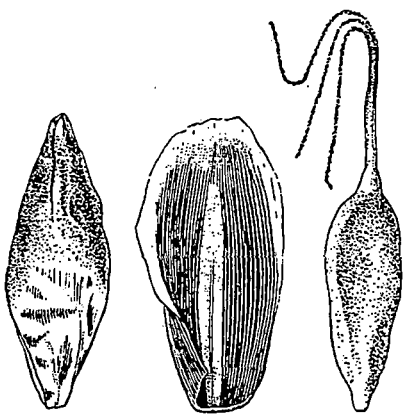
HABITAT:
Alpine areas; moist tundra, solifluction slopes, and gravelly lake shores; 2987 m (9800 ft) in MT.

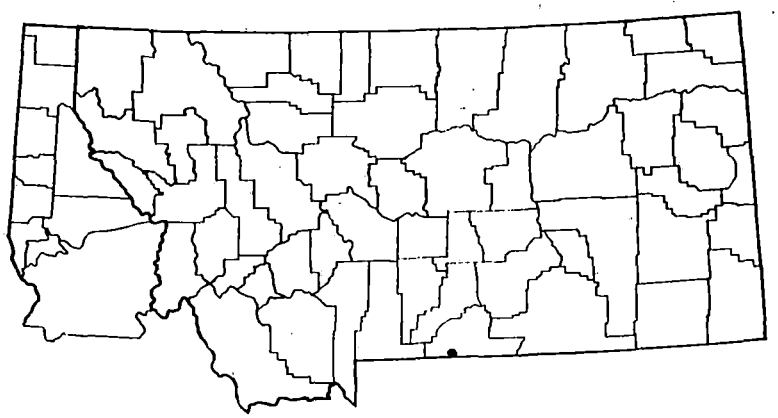
DESCRIPTION:
This is a tufted perennial with stems up to 20 cm (8 in) high, resembling a sedge (Carex). The slender, wiry leaves are less than 1 mm wide, and much shorter than the stem. The old, brown leaf bases are persistent at the stem base. The herbage is glabrous. The flowers are borne at the end of the stem in a slender, solitary spike 4-5 mm wide and 1-2 cm long. Each scale of the spike subtends 1-2 flowers, which are either male, female, or both. The 3-sided fruit (achene) is loosely wrapped with a brown scale-like structure (perigynium), 5-6 mm long. Fruit matures in late July and August.

This species could be confused with K. bellardii, which has narrower spikes, usually less than 2 mm wide. It might also be confused with Carex elynoides or C. scirpoidea, but both of these have perigynia that completely enclose the seed.

COMMENTS:
The only known site in Region 1 is a peripheral population, on the Beartooth Division of the Custer National Forest; it is not within the Absaroka-Beartooth Wilderness Area.

KOBRESIA MACROCARPA





LESQUERELLA CARINATA Rollins
Keeled Bladderpod

FAMILY: Brassicaceae (Mustard Family)

SYNONYMS: None.

USFS REGION 1 STATUS: MT - SENSITIVE.

USFWS STATUS: 3C

MONTANA STATUS: Sensitive.

GLOBAL AND STATE RANK: G3/S1

GLOBAL DISTRIBUTION: East-central ID, Teton Co., WY and sw. MT.

MONTANA COUNTIES: Beaverhead(?), Granite.

PHYSIOGRAPHIC DISTRIBUTION:
Upper Clark Fork River drainage, and Centennial Mtns.(?).

NATIONAL FOREST(S): Deerlodge; possibly occurring on Beaverhead, Lolo.

HABITAT:
Bare soil in grasslands and other open habitats from the lower montane zone to above timberline, often in calcareous areas; 1370-2900 m (4500-9500 ft).

DESCRIPTION:
Keeled bladderpod is a low, short-lived perennial with few-many prostrate or ascending, unbranched stems, 5-15 cm (2-6 in) long from a small taproot. The numerous basal leaves have ovate or elliptic blades approximately 1 cm long, and slender petioles longer than the blades. The few stem leaves are lance-shaped and much reduced. The herbage is densely covered with closely appressed, branched hairs. The flowers are borne on short stalks in an expanding inflorescence at the end of the stems. The four yellow petals are 8-10 mm long. The compressed elliptic fruits are 5-8 mm long and have keeled margins and faces. The fruit stalks are recurved. Flowering in May and June, fruiting in June and July.

This species can only be positively identified with mature fruit. The combination of keeled elliptic fruit and spoon-shaped leaves distinguish it from other members of the genus and those of Physaria.

COMMENTS:
A sterile specimen from the Centennial Mtns. appears to be this species, but identification is currently uncertain.

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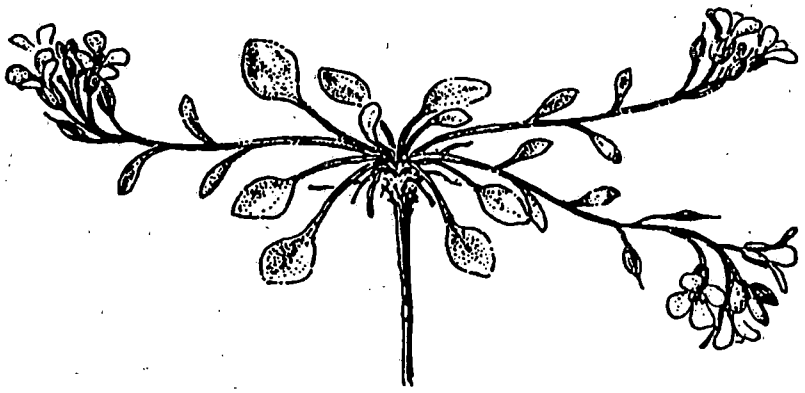
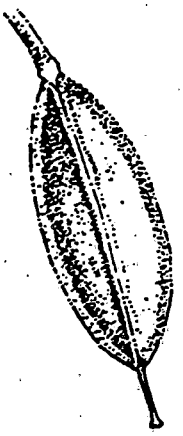
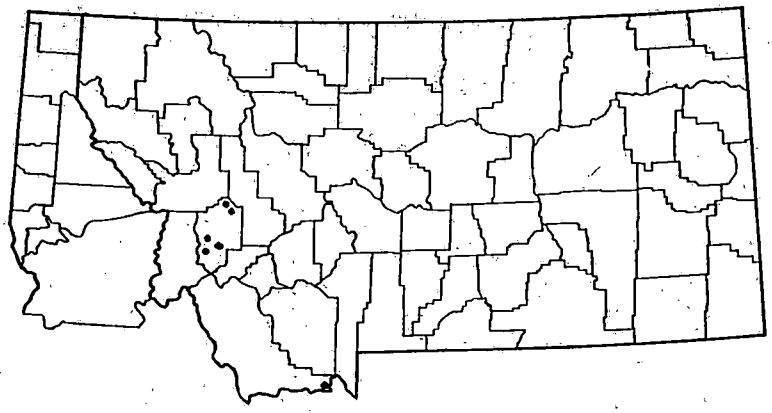
LESQUERELLA CARINATA







LESQUERELLA HUMILIS Rollins
Few-seeded Bladderpod

FAMILY: Brassicaceae (Mustard Family)

SYNONYMS: None.

USFS REGION 1 STATUS: MT - SENSITIVE.

USFWS STATUS: None.

MONTANA STATUS: Sensitive.

GLOBAL AND STATE RANK: G1/S1

GLOBAL DISTRIBUTION: Ravalli County, MT.

MONTANA COUNTIES: Ravalli.

PHYSIOGRAPHIC DISTRIBUTION: Bitterroot Mountains.

NATIONAL FOREST(S): Bitterroot.

HABITAT:
Subalpine and alpine slopes, in krummholz zone and higher; in open, rocky areas on granitic substrates; 2680-2923 m (8800-9587 ft).

DESCRIPTION:
A small, low perennial, this plant has 1-several unbranched stems 2-5 cm (1-2 in) long, from a simple taproot covered with old leaf bases. The basal leaves are 2-5 cm long and have entire-margined, ovate or elliptic blades and a long, narrow petiole. The 3-6 stem leaves are spoon-shaped and 3-7 mm long. The herbage is silvery with a dense covering of appressed, branched hairs. The small, terminal inflorescence is 3-5 flowered. The four yellow petals are 7-9 mm long. The compressed fruits are 3-4 mm long, and wider than long. Flowering in late June and July, fruiting in July and early August.

L. humilis could be confused with Physaria geyeri, as well as other members of Lesquerella. The alpine habitat is probably the best distinguishing character. L. humilis can be distinguished from other alpine species in the mustard family by the compressed fruits that are wider than long.

COMMENTS:
This species is a recently described narrow endemic, found only on three summits in the Bitterroot Range in Montana. Field surveys throughout this mountain range have not revealed the presence of any other populations.

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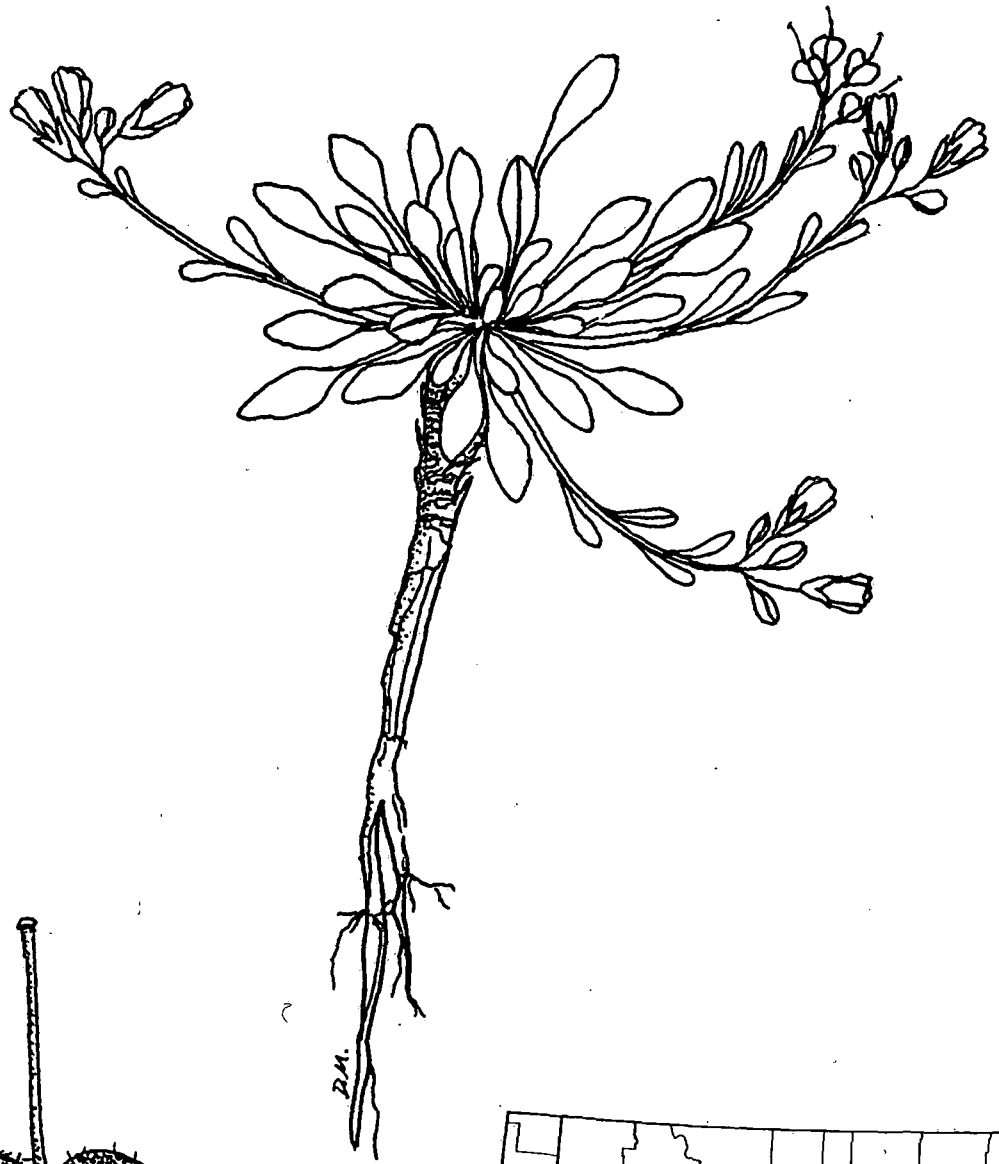
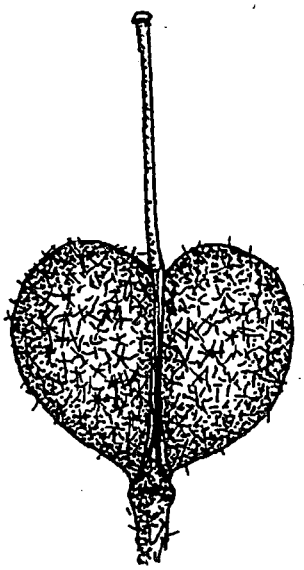
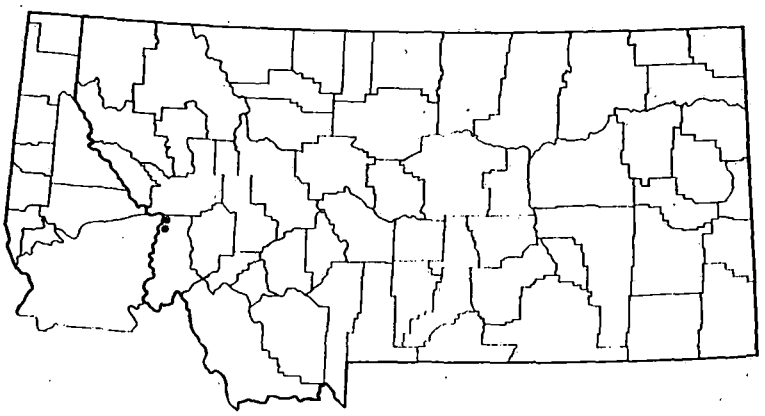
LESQUERELLA HUMILIS







LOMATIUM GEYERI (Wats.) Coult. & Rose
Geyer's Biscuit Root

FAMILY: Apiaceae (Carrot Family)

SYNONYMS: None.

USFS REGION 1 STATUS: MT - SENSITIVE.

USFWS STATUS: None.

MONTANA STATUS: Sensitive.

GLOBAL AND STATE RANK: G3G4/S1

GLOBAL DISTRIBUTION: Eastern WA, s. B.C., n. ID and nw. MT.

MONTANA COUNTIES: Lincoln.

PHYSIOGRAPHIC DISTRIBUTION: Yaak River valley.

NATIONAL FOREST(S): Kootenai; possibly occurring on Flathead.

HABITAT:
Vernally moist soil in open or partially shaded habitats in the lower montane zone; 600-900 m (2000-3000 ft).

DESCRIPTION:
This is a glabrous, herbaceous perennial with 1-3 stems 15-40 cm (6-16 in) tall from a tuberous-thickened taproot up to 4 cm (1 in) in diameter. The leaves are 2-3 times pinnately divided into narrow ultimate segments, and are borne on the lower half of the stem or sometimes only at the base. The smallest flower clusters consist of a number of stalked flowers attached at a single point (simple umbels). These clusters are, in turn, stalked and attached at a single point to form compound umbels. The small leaf-like bracts of the simple umbels are 2-3 mm long. The small white flowers have 5 separate petals attached on top of the ovary. The glabrous fruits are compressed, elliptic in outline and 7-12 mm long. Flowering in late May and June.

The Parsley Family contains many species which superficially resemble each other. A technical key must be consulted to distinguish among them.

COMMENTS:
Currently, there is only one Montana collection, but the species is reported to be common in the lower Yaak River drainage.

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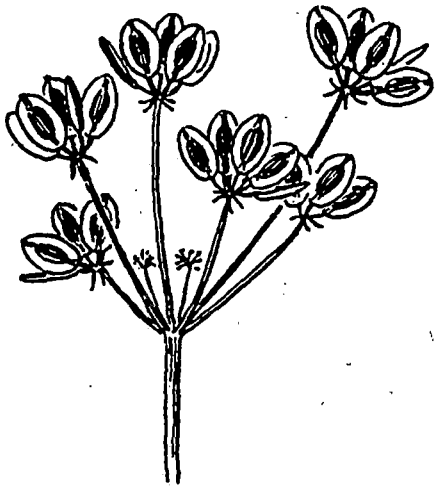
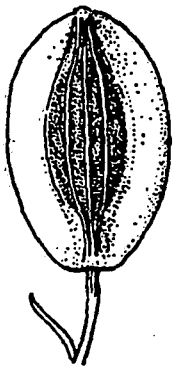
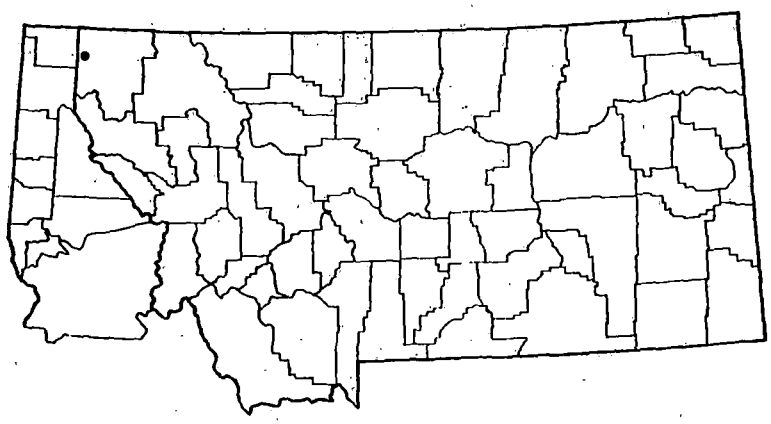
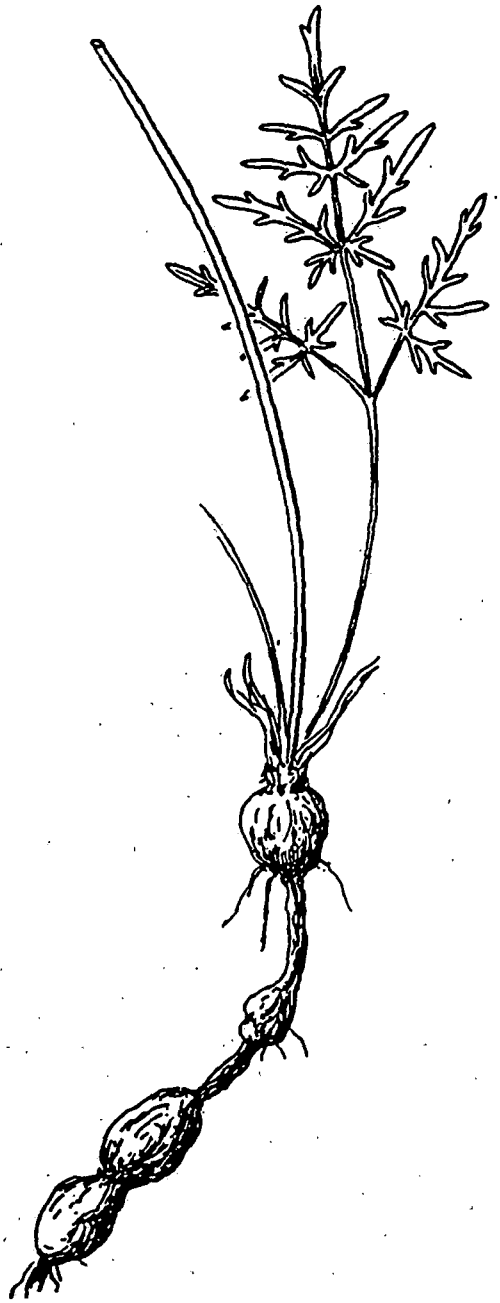
LOMATIUM GEYERI









MERTENSIA BELLA Piper
Oregon Bluebells

FAMILY: Boraginaceae (Borage Family)

SYNONYMS: None.

USFS REGION 1 STATUS: MT - SENSITIVE; ID - SENSITIVE.

USFWS STATUS: None.

MONTANA STATUS: Threatened.

GLOBAL AND STATE RANK: G4/S1

GLOBAL DISTRIBUTION:
Southwest OR, disjunct in central ID and adjacent MT.

MONTANA COUNTIES: Missoula.

PHYSIOGRAPHIC DISTRIBUTION: Bitterroot Mtns.

NATIONAL FOREST(S): Lolo; possibly occurring on Bitterroot.

HABITAT:
Wet, seepy, open or partially shaded slopes in the upper montane or lower subalpine zones; approximately 1860 m (6100 ft).

DESCRIPTION:
This species is a perennial herb with solitary stems 10-40 cm (4-16 in) tall from a bulb-like root. The ovate leaves are thin, entire-margined, evidently veiny, and 38 cm (1-3 in) long. The lowermost are reduced to membranous sheaths; the others have progressively reduced petioles upwards on the stem. The herbage is mostly glabrous. The blue flowers are stalked, and born in open inflorescences at the top of the stem and in the axils of the upper leaves. The lower two thirds of the 5 petals are united into a bell-shaped corolla 6-10 mm long. The calyx is 2-3 mm long and sparsely hairy. Flowering in late May and June.

The bell-shaped flowers, which lack a distinct lower tubular portion and flaring upper portion, distinguish this species from all other bluebells.

COMMENTS:
The one known Montana population is in an area that has been logged, and is also adjacent to an active mining operation.

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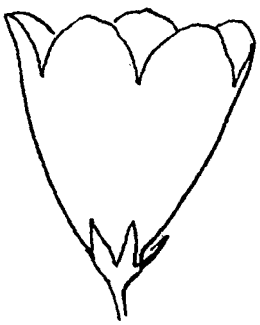
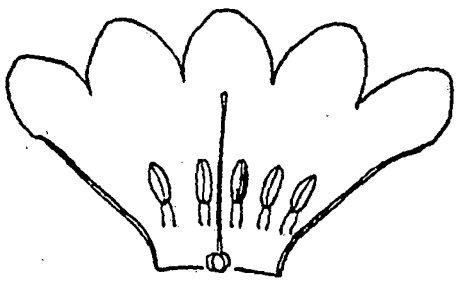
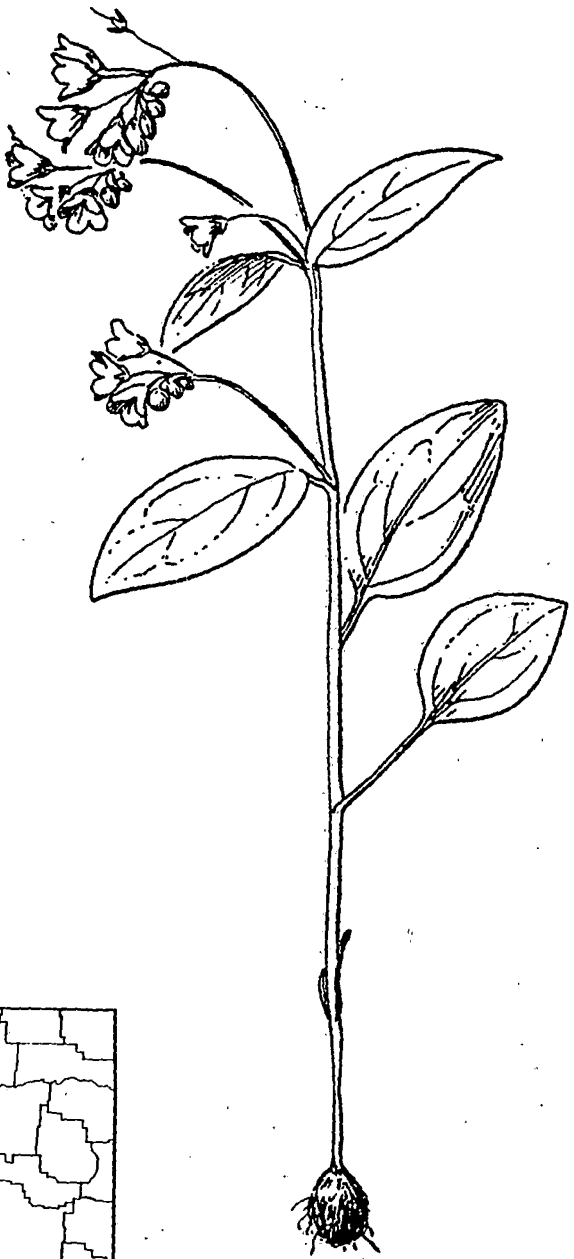
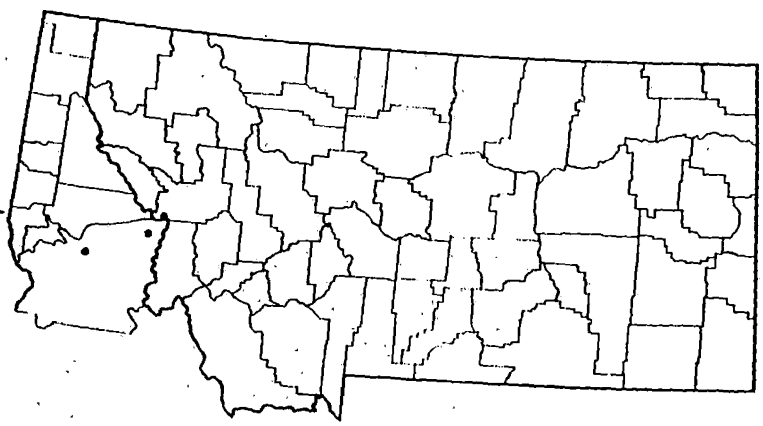
MERTENSIA BELLA









MIMULUS PRIMULOIDES Benth.
Primrose Monkey-flower

FAMILY: Scrophulariaceae (Figwort Family)

SYNONYMS:
M. PILOSELLUS Greene; M. PRIMULOIDES var. PILOSELLUS Smiley; M.PRIMULOIDES var. MINIMUS Peck.

USFS REGION 1 STATUS: MT - SENSITIVE.

USFWS STATUS: None.

MONTANA STATUS: Sensitive.

GLOBAL AND STATE RANK: G4/S1

GLOBAL DISTRIBUTION: WA to CA, e. to sw. MT and AZ.

MONTANA COUNTIES: Beaverhead, Ravalli.

PHYSIOGRAPHIC DISTRIBUTION: Bitterroot Mtns., Pioneer Mtns.

NATIONAL FOREST(S): Beaverhead, Bitterroot; possibly occurring on Deerlodge.

HABITAT:
Wet meadows and other moist, mostly open places at moderate to rather high elevations in the mountains; 1220-2440 m (4000-8000 ft).

DESCRIPTION:
This small perennial herb forms mats of small rosette-like plants from a network of thin shallow-rooted rhizomes. The stems are up to 6 cm (2 in) tall. The lanceshaped leaves are mostly entire-margined, without petioles, and 7-25 mm long. The foliage is covered with both stiff and soft hairs (sometimes glabrous), and is also often sticky. The flowers are solitary on the end of stalks longer than the leafy stems. The yellow corollas, 1-2 cm long, are two-lipped, and formed of petals united most of their length into a tube with flaring, notched lobes. The narrow calyx is 4-8 mm long and also formed of united segments. Flowering July through early September.

The combination of yellow flowers and leaves clustered near the base separates this species from other perennial monkeyflowers in our area.

COMMENTS:
In Montana, this species has been found in sphagnum bogs, which often provide valuable palynological records. One site (Lost Trail Bog) is adjacent to a ski area.

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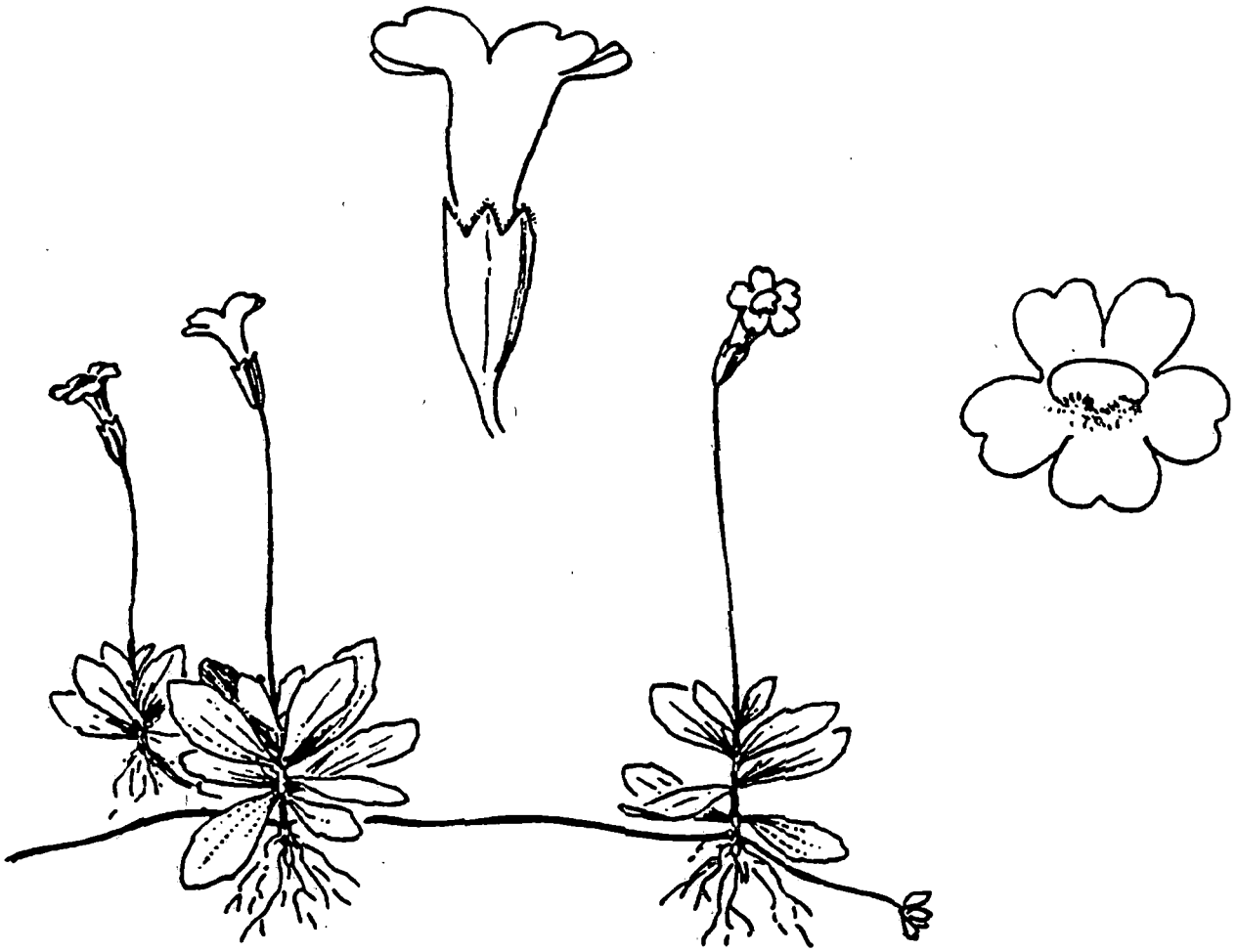
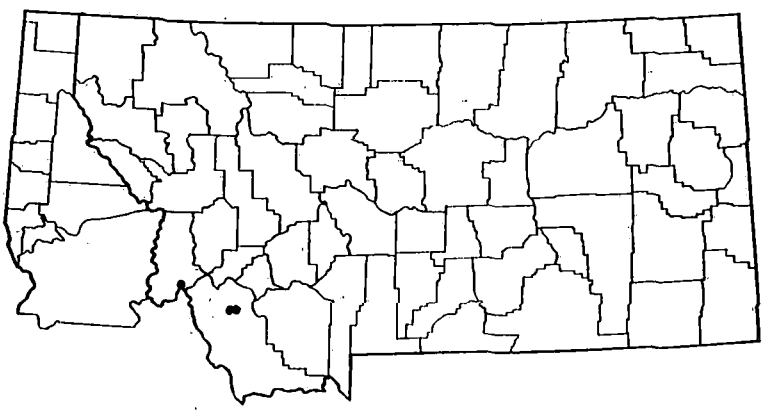
MIMULUS PRIMULOIDES





ORCHIS ROTUNDIFOLIA Banks ex Pursh
Round-leaved Orchis

FAMILY: Orchidaceae (Orchid Family)

SYNONYMS:
AMERORCHIS ROTUNDIFOLIA (Banks ex Pursh) Hulten; O. ROTUNDIFOLIA var. LINEATA Mousley.

USFS REGION 1 STATUS: MT - SENSITIVE.

USFWS STATUS: None.

MONTANA STATUS: Threatened.

GLOBAL AND STATE RANK: G5/S1

GLOBAL DISTRIBUTION:
AK to Greenland, s. to s. B.C., nw. MT, and nw. WY, MN, MI, WI, and NY.

MONTANA COUNTIES: Lewis & Clark, Powell.

PHYSIOGRAPHIC DISTRIBUTION: Bob Marshall Wilderness, Front Range Mtns.

NATIONAL FOREST(S):
Flathead, Lewis & Clark; possibly occurring on Helena, Kootenai, Lolo.

HABITAT:
Along streams and in wet woods, but usually where the drainage is good, often on limestone; 1430-1615 m (4700-5300 ft) in MT.

DESCRIPTION:
Round-leaved orchis is a glabrous, rhizomatous perennial with a single sub-basal leaf, and a stem 10-20 cm (4-8 in) tall. The leaf is elliptic to orbicular, with a rounded tip, and up to 10 cm (4 in) long. The few-to-several flowers terminate the stem in a narrow inflorescence. There are three white or pale pink sepals; the upper is hood-shaped and 6-10 mm long, slightly larger than the lateral ones. The two upper petals are narrowly lance-shaped. The large, lower petal (lip) is up to 9 mm long, white, spotted with purple, and deeply 3-lobed with a pair of lateral lobes and a notched lower one. The capsule is elliptic and contains thousands of tiny seeds. Flowering late June and July.

This species is easy to recognize by the single leaf and distinctive flower and should not be confused with anything else in our area.

COMMENTS:
Four of the five known locations for this species in Montana are found in the Front Range, outside the Bob Marshall Wilderness Area. Oil and gas exploration is a potential threat to these sites.

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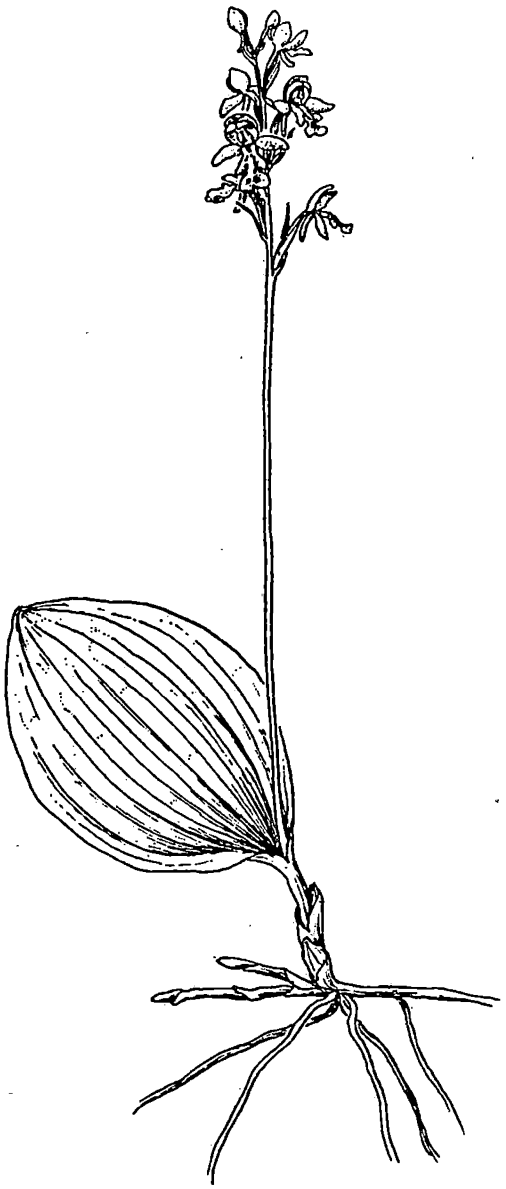
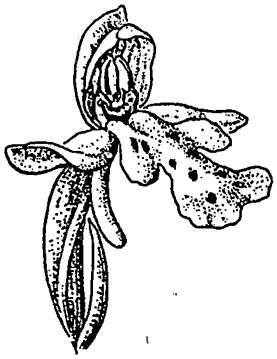
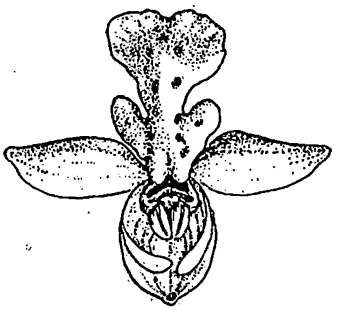
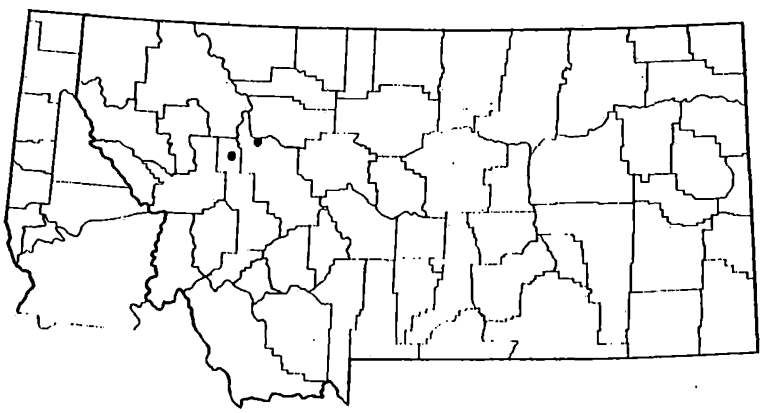
ORCHIS ROTUNDIFOLIA









OXYTROPIS COLUMBIANA St. John
Columbia River Crazyweed

FAMILY: Fabaceae (Pea Family)

SYNONYMS: O. CAMPESTRIS (L.) DC. var. COLUMBIANA (St. John) Barneby.

USFS REGION 1 STATUS: MT - SENSITIVE.

USFWS STATUS: None.

MONTANA STATUS: Threatened.

GLOBAL AND STATE RANK: G2/S1

GLOBAL DISTRIBUTION:
Along Columbia River in ne. WA, and upper Flathead region in nw. MT.

MONTANA COUNTIES: Flathead, Lake.

PHYSIOGRAPHIC DISTRIBUTION: Flathead Lake, North Fork Flathead River.

NATIONAL FOREST(S): Flathead; possibly occurring on Kootenai.

HABITAT:
Rocky or gravelly, open or partially shaded shores in major valleys; 880-1050 m (2900-3500 ft).

DESCRIPTION:
This perennial herbaceous species has tufted basal leaves and leafless stems, 1030 cm (4-12 in) tall from a branched rootstock. The leaves, 8-20 cm (3-8 in) long, are odd-pinnate with up to 17(23) lance-shaped leaflets, 5-30 mm long. The herbage is loosely covered with long hairs. The flowers are borne in a compact, narrow inflorescence that terminates the stem. The white flowers are 10-20 mm long and similar in shape to those of peas. The lower, keel-shaped petal is prolonged to a small point and has a large purple spot near the tip. The calyx is tubular, about half the length of the corolla, and loosely covered with gray or black hairs. The pods are 1-3 cm long, with a beak 5 mm long. Flowering late May through early July.

The white flowers with the purple keel-spot, together with the low elevation habitat, distinguish this species from all other Oxytropis. Most species of Astragalus have leafy stems.

COMMENTS:
This species is threatened by recreational, residential, and dam developments. Two older collections on the east side of the North Fork Flathead River (Glacier National Park) have not been recently verified. Field work conducted furing 1988 indicates there are taxonomic problems associated with this species.

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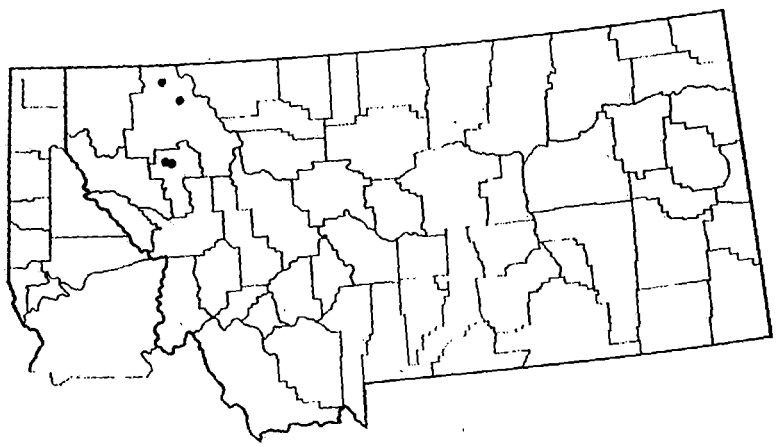
OXYTROPIS COLUMBIANA



OXYTROPIS PODOCARPA Gray
Stalked-pod Crazyweed

FAMILY: Fabaceae (Pea Family)

SYNONYMS:
SPIESIA PODOCARPA Kuntze; ARAGALLUS PODOCARPUS Nels.; O. ARCTICA var. INFLATA Hook.; SPIESIA INFLATA Britt.; ARAGALLUS INFLATUS A. Nels.; O. HALLII Bunge; ARAGALLUS HALLII Rydb.

USFS REGION 1 STATUS: MT - SENSITIVE.

USFWS STATUS: None.

MONTANA STATUS: Sensitive.

GLOBAL AND STATE RANK: G4/S1

GLOBAL DISTRIBUTION:
Rocky Mtns., from Alberta to CO, e. to the Atlantic coast.

MONTANA COUNTIES: Glacier, Teton.

PHYSIOGRAPHIC DISTRIBUTION: Glacier National Park, Front Range Mtns.

NATIONAL FOREST(S):
Lewis & Clark; possibly occurring on Beaverhead, Deerlodge, Flathead, Helena.

HABITAT:
Alpine ridges and slopes, often on limestone substrates; 2225-2500 m (7300-8200 ft) in MT.

DESCRIPTION:
Usually forming small, dense cushions, this perennial species has naked stems that are erect or prostrate and up to 7 cm (3 in) long. The basal leaves are 2-5 cm (1-2 in) long and pinnately divided into 9-27 narrowly lance-shaped leaflets. The herbage is covered with stiff, silvery hairs. The 1-2 purple flowers resemble pea flowers and are held erect at the top of the stem. The corolla is 12-17 mm long. The tubular calyx is purplish and 2/3 the length of the corolla. The papery and inflated pod is 15-25 mm long and ovoid in outline. Flowering in June, fruiting late June through August.

This is our only purple-flowered Oxytropis with fewer than 4 flowers. Species of alpine Astragalus have leafy stems.

COMMENTS:
A collection in Glacier National Park was made in 1897, and the occurrence has not been verified since then. The three recently observed locations are all in the Front Range, outside of the Bob Marshall Wilderness Area.

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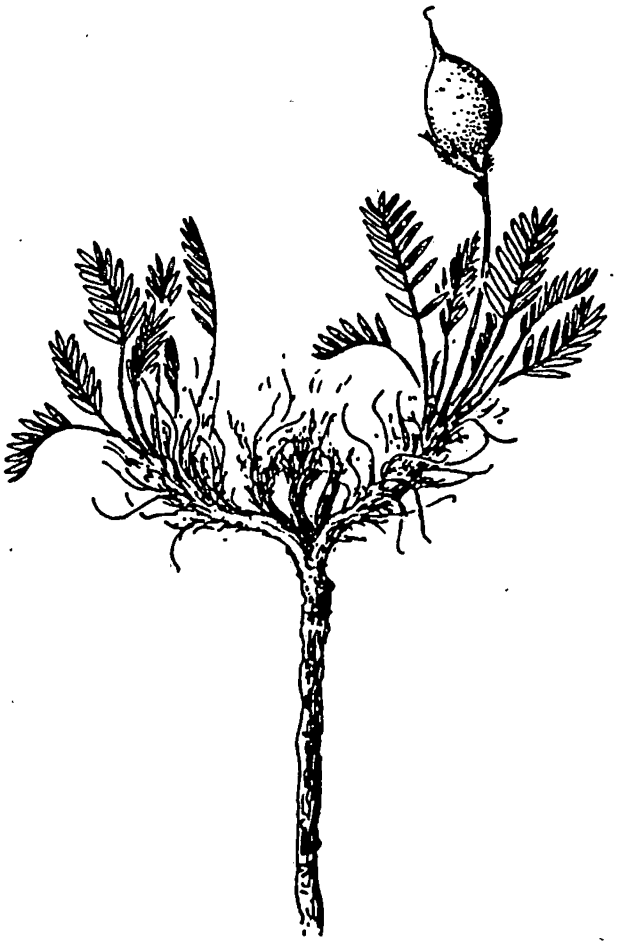
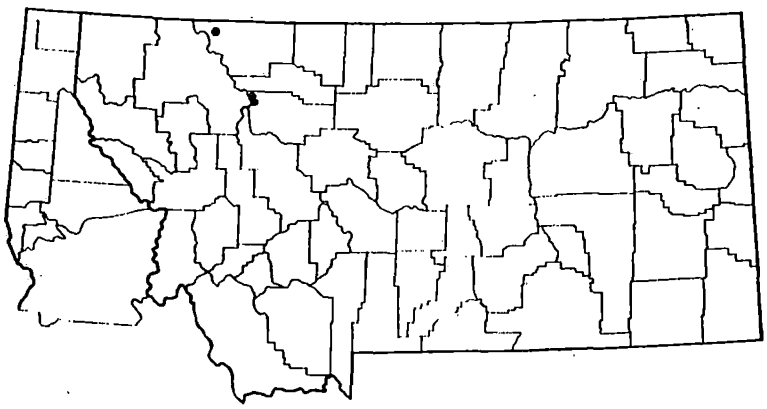
OXYTROPIS PODOCARPA





PENSTEMON ATTENUATUS Dougl. var. MILITARIS (Greene) Cronq.
Taper-leaved Beardtongue

FAMILY: Scrophulariaceae (Figwort Family)

SYNONYMS: P. MILITARIS Greene; P. ATTENUATUS ssp. MILITARIS Keck.

USFS REGION 1 STATUS: MT - SENSITIVE.

USFWS STATUS: None.

MONTANA STATUS: Sensitive.

GLOBAL AND STATE RANK: G4T4/S1

GLOBAL DISTRIBUTION:
Central ID, from the Salmon R. axis on the n. to the Snake R. plains on the s., barely extending into adjacent MT; also in the mtns. of Cassia Co., ID.

MONTANA COUNTIES: Ravalli.

PHYSIOGRAPHIC DISTRIBUTION: Bitterroot Mtns.

NATIONAL FOREST(S): Bitterroot; possibly occurring on Beaverhead.

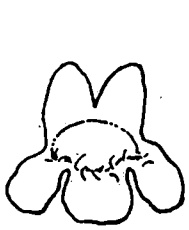
HABITAT:
Drier meadows to moist, open or wooded slopes at moderate to rather high elevations in the mountains; 2439 m (8000 ft) in MT.

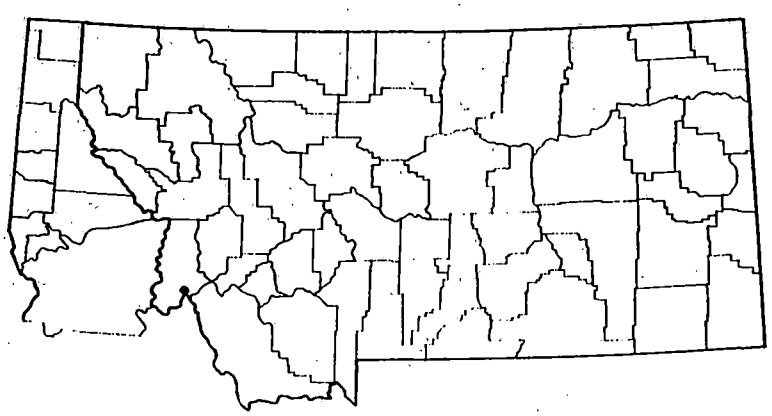
DESCRIPTION:
Taper-leaved beardtongue is a tufted perennial with stems up to 70 cm (28 in) tall from a loosely branched, woody rootstock. The deep green leaves are narrowly lanceshaped and mostly entire-margined. The basal ones are up to 17 cm (7 in) long, including the narrow petiole. The stem leaves are opposite, mostly without petioles, and are reduced upwards. The foliage is glabrous. The glandular-hairy inflorescence consists of clusters of numerous short-stalked flowers in the axils of the upper leaves. The tubular corolla is flared and two-lipped at the mouth. It is glandular-hairy on the outside, 12-20 mm long, and deep blue. The calyx is 4-7 mm long and has ovate or lance-shaped segments with white margins. The anther sacs are sparsely hairy. Flowering in July.

Penstemon is a large genus in our area. The combination of entire-margined leaves, glandular inflorescence, and hairy anthers separate this species from most others found at higher elevations in the southwest mountains.

COMMENTS:
Currently known in Montana from only one location in Ravalli County, near Saddle Mountain, where it was last observed in 1968.

PENSTEMON ATTENUATUS var. MILITARIS





PENSTEMON LEMHIENSIS (Keck) Keck and Cronq.
Lemhi Beardtongue

FAMILY: Scrophulariaceae (Figwort Family)

SYNONYMS: P. SPECIOSUS Dougl. ex Lindl. ssp. LEMHIENSIS Keck.

USFS REGION 1 STATUS: MT - SENSITIVE.

USFWS STATUS: C2

MONTANA STATUS: Threatened.

GLOBAL AND STATE RANK: G3/S2

GLOBAL DISTRIBUTION: Southwestern MT and adjacent Lemhi Co., ID.

MONTANA COUNTIES: Beaverhead; historically known from Ravalli.

PHYSIOGRAPHIC DISTRIBUTION:
Big Hole Valley, Bitterroot Mtns., Pioneer Mtns., Tendoy Mtns.

NATIONAL FOREST(S):
Beaverhead, historically known from Bitterroot; possibly occurring on Deerlodge.

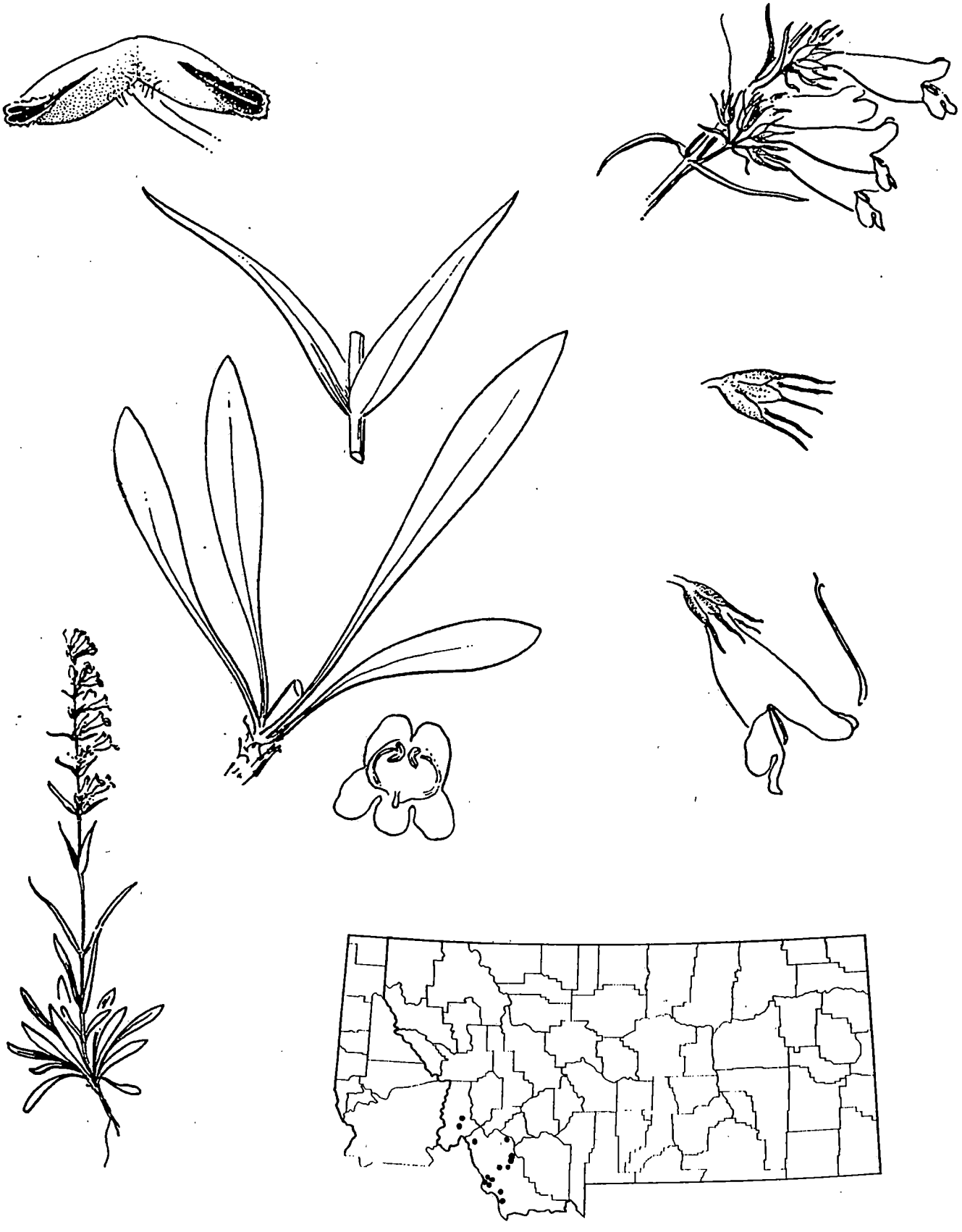
HABITAT:
Open sagebrush/bunchgrass areas, often near the lower treeline, from moderate to rather high elevations in the mountains; 1300-2470 m (4280-8100 ft).

DESCRIPTION:
This is a large perennial, with 1-several stems up to 70 cm (28 in) tall from a branched rootstock and a short taproot. The leaves are narrowly lance-shaped and entire-margined. The basal ones have a petiole and are up to 16 cm (6 in) long. The opposite stem leaves are without petioles and are reduced upwards. The herbage is lightly covered with small hairs and occasionally with a thin bluish wax. The inflorescence consists of clusters of several short-stalked flowers in the axils of the upper leaves. The tubular corolla is flared and two-lipped at the mouth. It is 25-35 mm long and bright blue. The lance-shaped calyx segments taper to a long tip, are 7-11 mm long, and have a narrow white margin. Flowering in late June and July.

There are three species of tall beardtongues with large, bright blue flowers in southwestern Montana. P. lemhiensis can be distinguished in having narrow, tapered calyx segments greater than 7 mm long, and by its glabrous sterile stamen (staminode).

COMMENTS:
This species is a regional endemic with a restricted geograpic range. The historical records in Ravalli Co., MT, have not been recently verified. Population size tends to be small, and some sites are currently threatened by grazing and mining.

PENSTEMON LEMHIENSIS



POTAMOGETON OBTUSIFOLIUS Mert. & Koch
Blunt-leaved Pondweed

FAMILY: Potamogetonaceae (Pondweed Family)

SYNONYMS: None

CITATION:
Gleason, H.A. 1952. The New Britton and Brown Illustrated Flora of the Northeastern United States and adjacent Canada. The New York Botanic Garden. Vol. 1:80.

USFS REGION 1 STATUS: MT - SENSITIVE.

USFWS STATUS: None

MONTANA STATUS: Watch List.

GLOBAL AND STATE RANK: G5/S1S2

GLOBAL DISTRIBUTION:
Que. and N.S. to NJ, west to Ont. and MN, disjunct in nw MT.

MONTANA COUNTIES: Flathead, Glacier, Lake, Missoula.

PHYSIOGRAPHIC DISTRIBUTION: Upper Flathead Valley and adjacent mountains.

NATIONAL FOREST(S): Flathead; pssibly occurring on Lewis & Clark, Lolo.

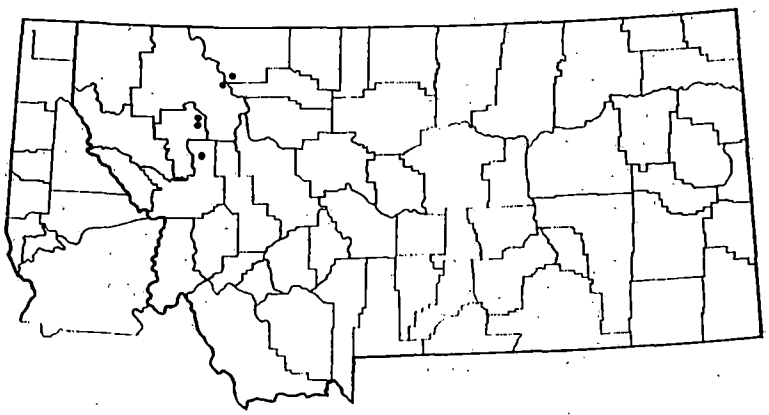
HABITAT:
Ponds, sloughs and lakes, usually at lower elevations; 950-1575 m (3100-5200 ft).

DESCRIPTION:
Blunt-leaved pondweed is an aquatic, rhizomatous perennial with slender, submergent or floating stems up to 100 cm (39 in) long. The leaves are linear, 3-10 cm (1-4 in) long and 2-4 mm wide with a small round gland on either side at the base. There is a white-membranous leaf stipule that surrounds the stem above the point where the leaf diverges. The herbage is glabrous. The minute flowers are borne on longstalked, narrow, interrupted spikes in the axils of the upper leaves. The flowers consist of only the stamens and ovary; there are no petals or sepals. The fruit (achene) is oval in outline, 3-4 mm long, and compressed with a keel on the outer edge. Flowering and fruiting in July and August.

The narrow-leaved pondweeds are a very difficult group. A technical key must be employed in order to distinguish among the species.

COMMENTS:
This species is difficult to separate from other narrow-leaved pondweeds, and thus may be more common than current herbarium records indicate.

POTAMOGETON OBTUSIFOLIUS



RANUNCULUS JOVIS A. Nels.
Jove's Buttercup

FAMILY: Ranunculaceae (Buttercup Family)

SYNONYMS: R. DIGITATUS Hook.

USFS REGION 1 STATUS: MT - SENSITIVE.

USFWS STATUS: None.

MONTANA STATUS: Sensitive.

GLOBAL AND STATE RANK: G4/S1

GLOBAL DISTRIBUTION:
Southeastern ID to NV, e. to sw. MT, Yellowstone National Park, sw. WY, and adjacent UT.

MONTANA COUNTIES: Beaverhead, Park.

PHYSIOGRAPHIC DISTRIBUTION: Centennial Mtns., Absaroka-Beartooth Mtns.

NATIONAL FOREST(S): Gallatin; possibly occurring on Beaverhead, Deerlodge.

HABITAT:
In sagebrush to forested slopes, at mid- to high elevations in the mountains; 2285-2900 m (7500-9500 ft) in MT.

DESCRIPTION:
This glabrous perennial has 1-several stems 4-10 cm (1-4 in) tall from a cluster of fleshy, club-shaped roots. The basal leaves (often lacking) are 2-3 cm long, with a petiole and a blade deeply divided into 3-5 narrow lobes. The stem leaves are clustered together and are longer than the basal ones. The yellow flowers are solitary on the ends of stalks 2-6 cm (1-2 in) long. The 5 separate petals are narrowly lance-shaped and 7-12 mm long. The glabrous sepals fall off shortly after opening. The fruit is an ovoid cluster of 50-200 achenes. These egg-shaped achenes are approximately 1 mm long., slightly compressed and finely hairy, with a straight, slender beak approximately 0.5 mm long. Flowering in June.

This species can be distinguished from other buttercups by the clustered, fleshy roots and the deeply 3-5 parted leaves.

COMMENTS:
A distinctive species, which blooms soon after snow release.

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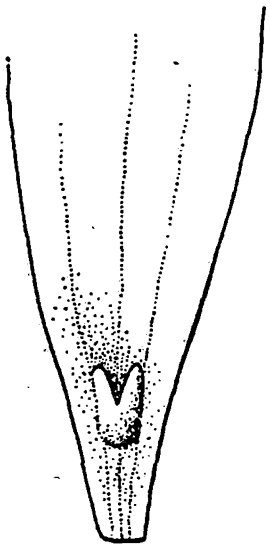
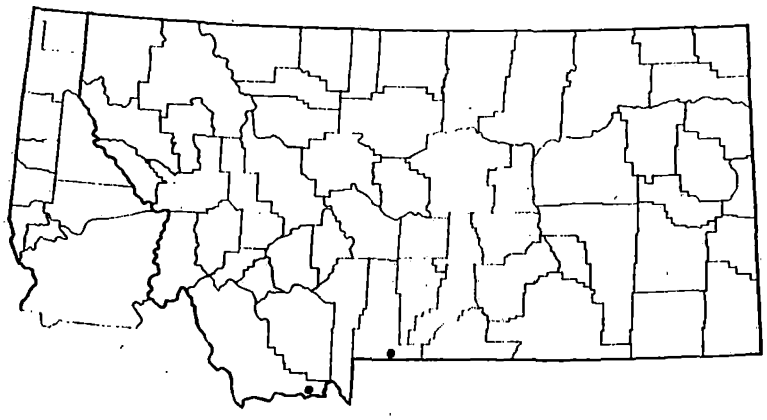
RANUNCULUS JOVIS





SALIX BARRATTIANA Hook.
Barratt's Willow

FAMILY: Salicaceae (Willow Family)

SYNONYMS: None.

USFS REGION 1 STATUS: MT - SENSITIVE.

USFWS STATUS: None.

MONTANA STATUS: Sensitive.

GLOBAL AND STATE RANK: G5/S1

GLOBAL DISTRIBUTION: AK and Yukon, south to B.C., Alberta, and MT.

MONTANA COUNTIES: Carbon, Glacier.

PHYSIOGRAPHIC DISTRIBUTION: Beartooth Mtns., Glacier National Park.

NATIONAL FOREST(S):
Custer; possibly occurring on Flathead, Gallatin, Lewis & Clark.

HABITAT:
Cold, moist soil near or above timberline; 2075-3200 m (6800-10500 ft).

DESCRIPTION:
This is a much-branched shrub up to 1 m (3 ft) tall, with young twigs that are sticky and covered with long, soft hairs. The leaves have petioles 5-14 mm long, and entire, elliptic or broadly lance-shaped blades 4-7 cm (1-3 in) long. They are densely covered with long gray hair beneath, thinly so above. The flowers are without petals and sepals and are borne in dense spike-like inflorescences (aments or catkins). These are erect and sessile on twigs formed the previous year. The male and female aments occur on separate plants. The seed capsules are hairy, and the bracts subtending them are black. The female aments are 4-9 cm (2-4 in) long; the males are 2-5 cm long. Fruiting in late July and August.

Species of willow are often difficult to identify. The alpine habitat, sessile catkins and sticky twigs will usually distinguish S. barrattiana from the others in our area. Good specimens with both leaves and mature female catkins are necessary for positive identification.

COMMENTS:
The two known Montana sites are the only ones in the contiguous U.S.; both are small populations.

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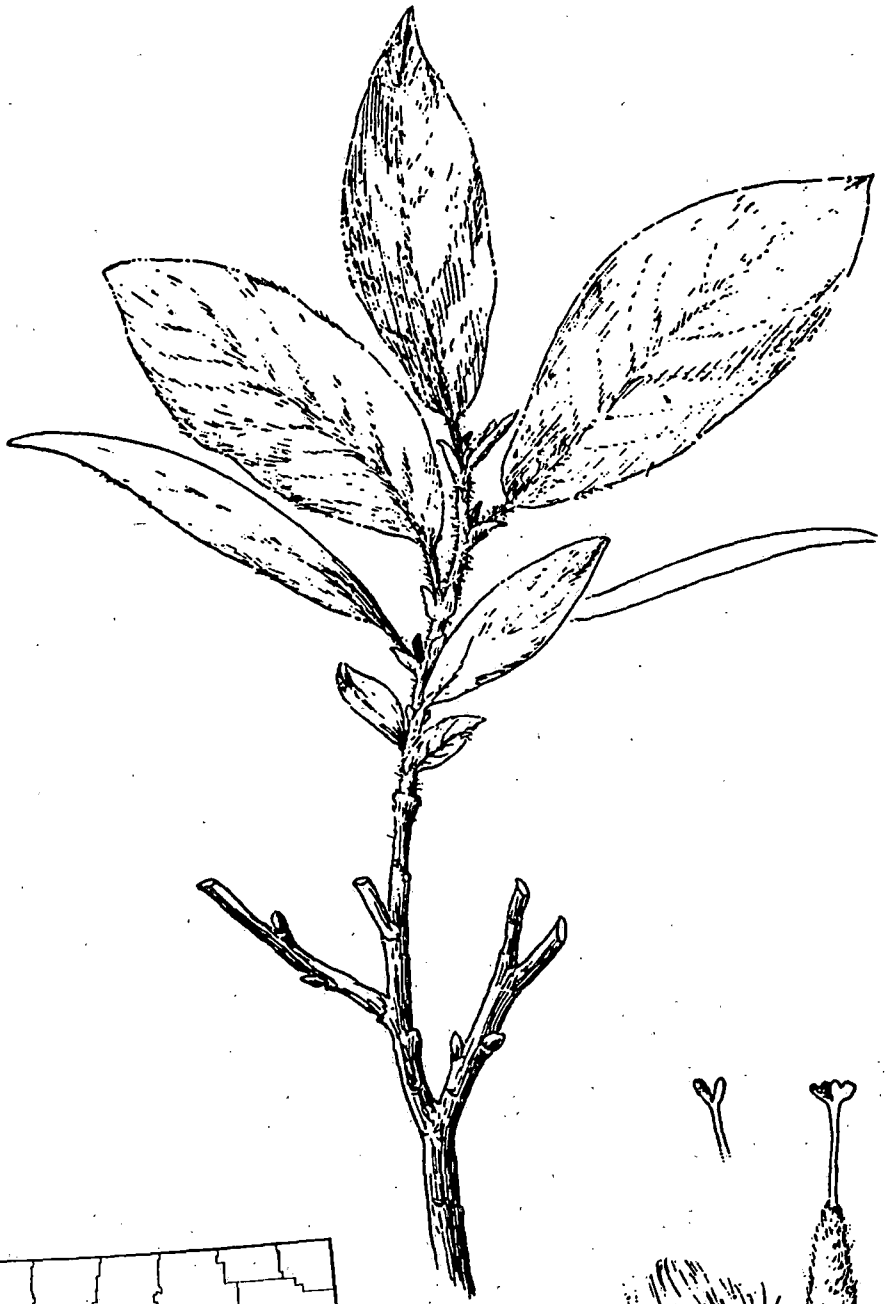
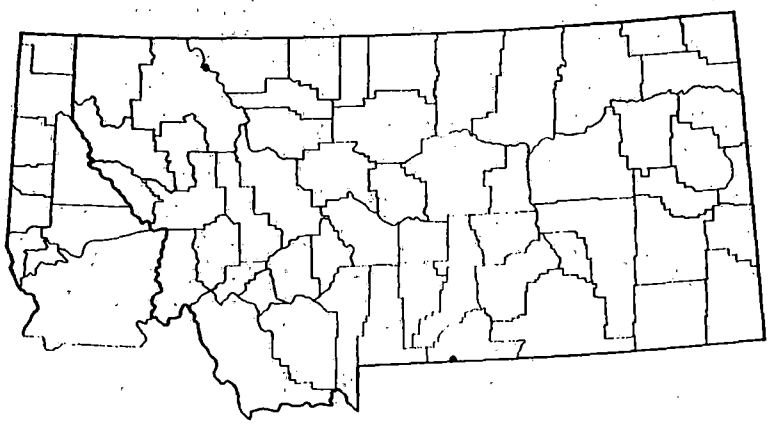
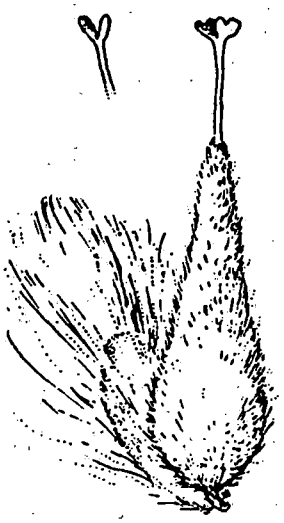
SALIX BARRATTIANA







SALIX WOLFII Bebb var. WOLFII
Wolf's Willow

FAMILY: Salicaceae (Willow Family)

SYNONYMS: None.

USFS REGION 1 STATUS: MT - SENSITIVE.

USFWS STATUS: None.

MONTANA STATUS: Sensitive.

GLOBAL AND STATE RANK: G4T4/S1

GLOBAL DISTRIBUTION:
Species: OR to NV, east to CO and w. MT. Var. wolfii: CO and UT, north to sw. MT and e. ID.

MONTANA COUNTIES: Deerlodge, Madison.

PHYSIOGRAPHIC DISTRIBUTION: Anaconda-Pintlar Mtns., Gravelly Mtns.

NATIONAL FOREST(S):
Beaverhead, Deerlodge; possibly occurring on Bitterroot, Custer, Gallatin.

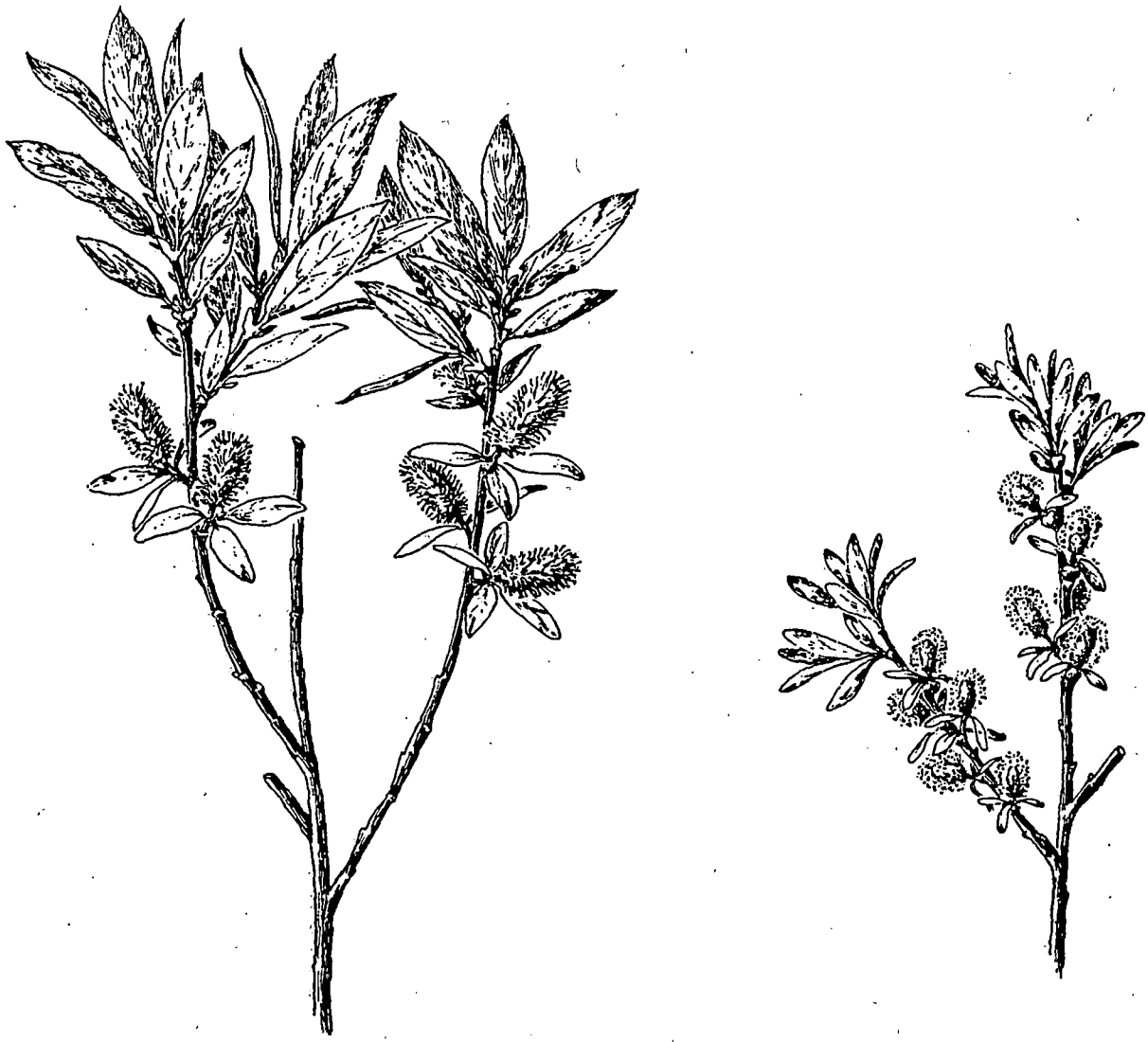
HABITAT:
Streambanks and wet meadows in the upper montane and subalpine zones; 2450-2750 m (8000-9000 ft).

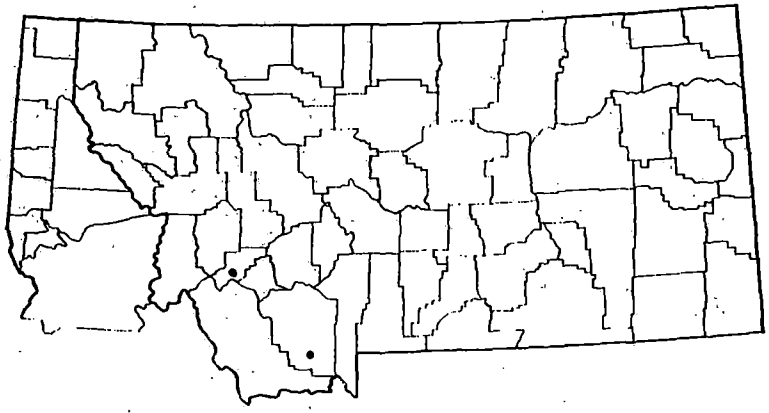
DESCRIPTION:
This willow is a much-branched shrub, 60-200 cm (2-7 ft) tall, with young twigs that are loosely covered with long, soft hairs. The leaves have short petioles 210 mm long, and entire-margined, elliptic blades up to 4 cm long. They are usually densely covered with white hairs, more so beneath than above. The flowers are without petals and sepals and are borne in dense spike-like inflorescences (aments or catkins). These are subtended by 2-5 leaf-like bracts and borne on the twigs below the current year's terminal growth. The male and female aments occur on separate plants. The female aments are 1-3 cm long; the males are slightly smaller. The capsules are 3-5 mm long, glabrous or slightly hairy, and subtended by a brown scale. Fruiting in July and August.

Species of willow are difficult to identify. A technical key should be consulted in order to distinguish S. wolfii var. wolfii from closely related species. Good specimens with both leaves and mature female catkins are necessary for positive identification.

COMMENTS:
This variety is more common to the south, but in Montana it is currently known only from two counties in the southwestern portion of the state.

SALIX WOLFII var. WOLFII





SATUREJA DOUGLASII (Benth.) Briq.
Yerba Buena

FAMILY: Lamiaceae (Mint Family)

SYNONYMS: None.

USFS REGION 1 STATUS: MT - SENSITIVE.

USFWS STATUS: None.

MONTANA STATUS: Watch List.

GLOBAL AND STATE RANK: G4/S1

GLOBAL DISTRIBUTION:
B.C. to CA, mainly west of the Cascade Mtns., but east to n. ID and nw. MT.

MONTANA COUNTIES: Missoula, Ravalli, Sanders.

PHYSIOGRAPHIC DISTRIBUTION:
Upper Bitterroot and lower Clark Fork river valleys.

NATIONAL FOREST(S): Bitterroot, Kootenai, Lolo.

HABITAT:
Partial or deep shade of moist forests in the montane zone; 670-1600 m (2200-5300 ft).

DESCRIPTION:
This perennial, rhizomatous species has prostrate, four-angled stems up to 1 m (3 ft) long that frequently root at the nodes, and short erect branches. The opposite leaves are ovate or nearly round and 1-4 cm long, with bluntly toothed margins. The petioles are short or lacking. The herbage is minutely and inconspicuously hairy. The flowers are borne singly on nodding stalks in the leaf axils. The white or purple-tinged corolla is tubular with a short, flaring, two-lipped mouth, 7-10 mm long. It is covered with short, stiff hairs on the outside. The calyx segments have 3 nerves each and are united most of their length. Flowering in July.

The opposite leaves and 4-angled stems identify this species as a member of the Mint Family. The long-stalked flowers, solitary in the leaf axils, separate it from other members of this family in our area.

COMMENTS:
This species seems to respond positively to light disturbance. In western Montana, it is currently known from four collections.

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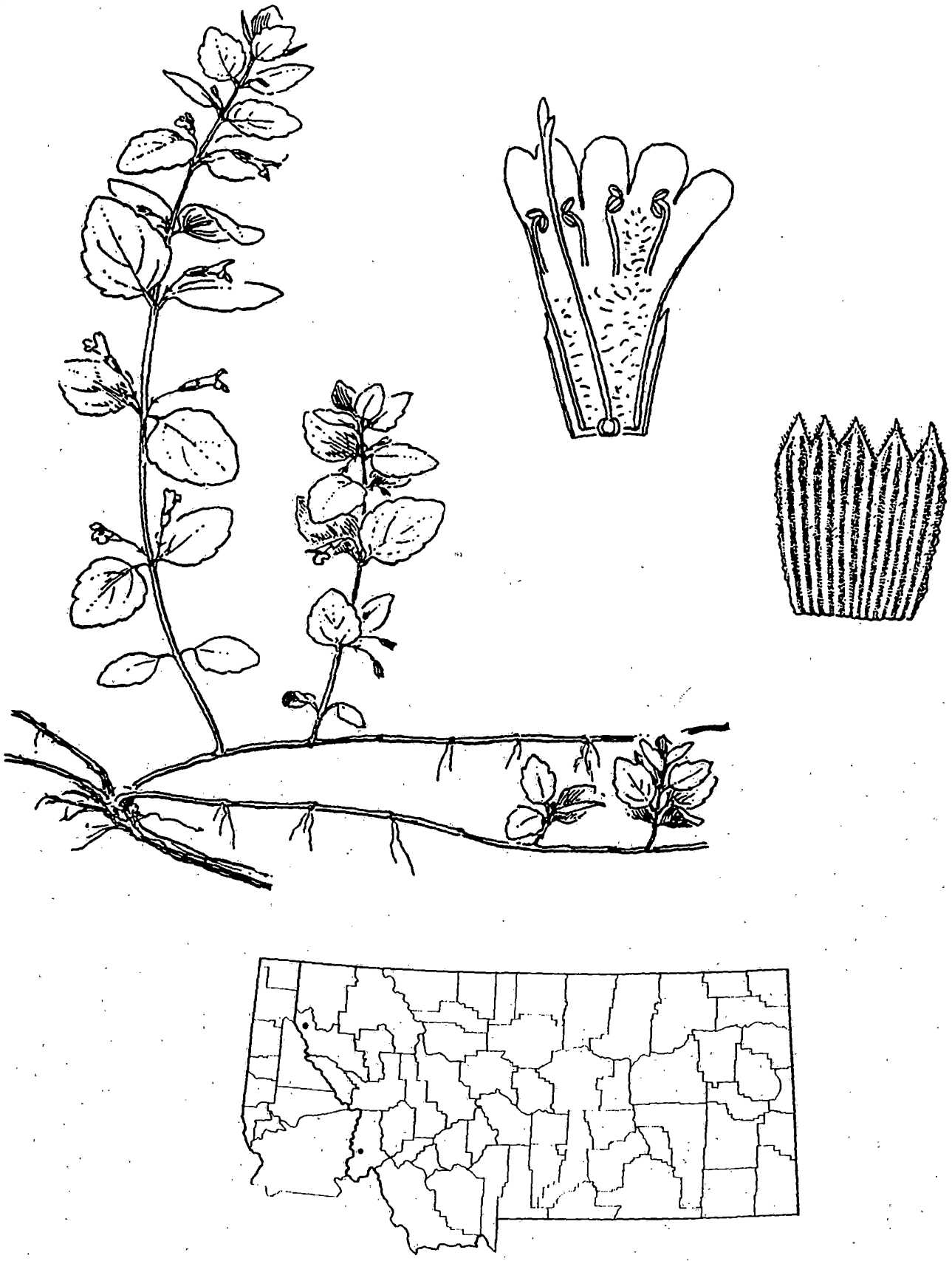
SATUREJA DOUGLASII



SAUSSUREA DENSA (Hook.) Rydb.
Dwarf Saw-wort

FAMILY: Asteraceae (Sunflower)

SYNONYMS: S. NUDA Ledeb. var. DENSA Hook.; S. ALPINA var. DENSA Hook.

USFS REGION 1 STATUS: MT - SENSITIVE.

USFWS STATUS: None.

MONTANA STATUS: Sensitive.

GLOBAL AND STATE RANK: G4/S1

GLOBAL DISTRIBUTION: Southern B.C. and Alberta, nw. MT.

MONTANA COUNTIES: Lewis & Clark, Pondera, Teton.

PHYSIOGRAPHIC DISTRIBUTION: Front Range Mtns.

NATIONAL FOREST(S): Lewis & Clark; possibly occurring on Flathead.

HABITAT:
Talus slopes and other rocky, open habitats above timberline, in regions of limestone parent material; 2275-2600 m (7500-8500 ft).

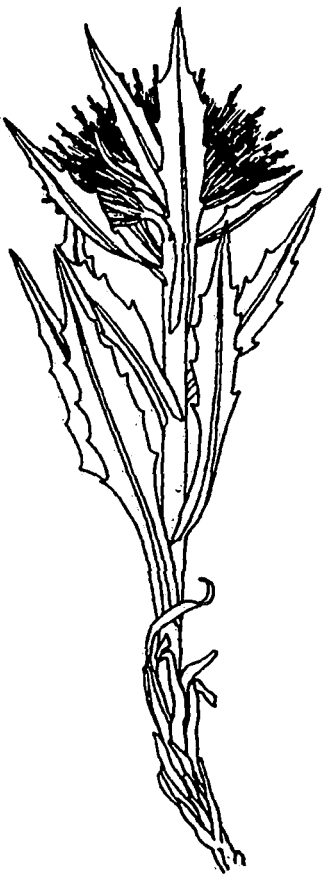
DESCRIPTION:
This is a dwarf perennial herb, 5-20 cm (2-8 in) high from a woody rootstock. The lance-shaped leaf blades are coarsely toothed, up to 8 cm (3 in) long, and have a broad petiole. The alternate leaves are crowded on the stem, reduced and lacking petioles towards the top. The herbage is covered with long, tangled hairs when young, but becomes glabrous with age. The purple flowering heads are borne in a dense cluster subtended by leaves at the top of the stem. The narrow involucral bracts of the heads are 11-15 mm long. All of the flowers are tubular (disk flowers); ray flowers are absent. The seeds (achenes) have numerous minutely branched bristles (pappus) at the top. Flowering in July.

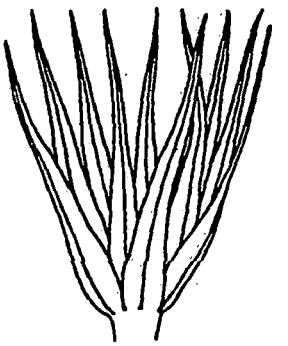
The clustered, purple, rayless flowering heads, together with the rocky, high elevation habitat, are distinctive. The similar S. weberi, occurring in the southwestern mountains, has broad involucral bracts with rounded tips.

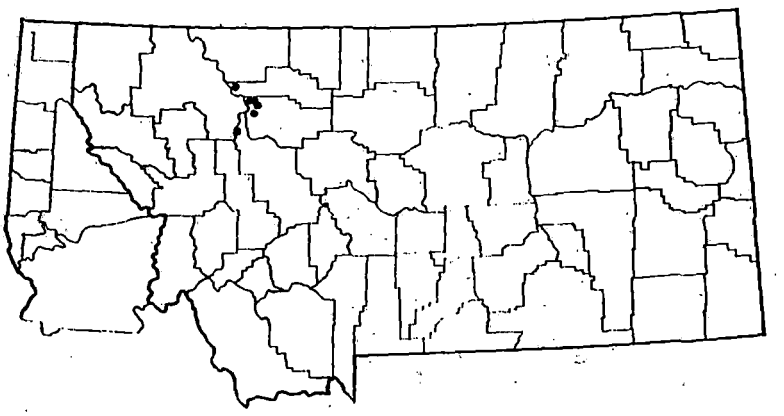
COMMENTS:
In Region 1, this species is restricted to six known occurrences in the Front Range Mountains. Its taxonomic relationships with other Saussurea species remain to be elucidated.

7/88

SAUSSUREA DENSA







SAUSSUREA WEBERI Hulten
Weber's Saw-wort

FAMILY: Asteraceae (Sunflower Family)

SYNONYMS: None.

USFS REGION 1 STATUS: MT - SENSITIVE.

USFWS STATUS: None.

MONTANA STATUS: Threatened.

GLOBAL AND STATE RANK: G3/S1

GLOBAL DISTRIBUTION: Rocky Mtns., CO to sw. MT.

MONTANA COUNTIES: Beaverhead, Deerlodge, Granite.

PHYSIOGRAPHIC DISTRIBUTION: Anaconda-Pintlar Range.

NATIONAL FOREST(S): Beaverhead, Deerlodge.

HABITAT: Moist alpine meadows; approximately 2830 m (9300 ft) in MT.

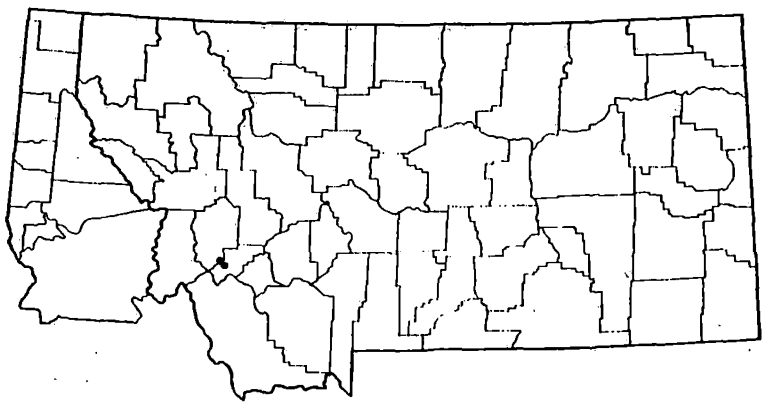
DESCRIPTION:
This is a dwarf perennial herb, 5-20 cm (2-8 in) high from a woody rootstock. The lance-shaped leaf blades are coarsely toothed, up to 8 cm (3 in) long, and have a broad petiole. The alternate leaves are crowded on the stem, reduced and lacking petioles towards the top. The herbage is covered with long tangled hairs when young, but becomes glabrous with age. The purple flowering heads are borne in a dense cluster subtended by leaves at the top of the stem. The broad involucral bracts of the heads have rounded tips and are 11-15 mm long. All of the flowers are tubular (disk flowers); ray flowers are absent. The seeds (achenes) have numerous minutely-branched bristles (pappus) at the top. Flowering in July and early August.

The clustered, purple, rayless flowering heads, together with the high elevation habitat, are distinctive. The similar S. densa, occurring in the northwestern mountains, has narrow, pointed involucral bracts.

COMMENTS:
There is only one known population of this plant in MT, at Goat Flat in the Anaconda-Pintlar Wilderness Area; the site is being impacted by use of a pack trail.

7/88

SAUSSUREA WEBERI



SAXIFRAGA TEMPESTIVA Elvander & Denton
Storm Saxifrage

FAMILY: Saxifragaceae (Saxifrage Family)

SYNONYMS: None.

CITATION:
Elvander, P.E. and M.F. Denton. 1976. Saxifraga tempestiva (Saxifragaceae), a new species from the Pacific Northwest. Madrono 23:346-354.

USFS REGION 1 STATUS: MT - SENSITIVE.

USFWS STATUS: None.

MONTANA STATUS: Limited Distribution

GLOBAL AND STATE RANK: G2/S2

GLOBAL DISTRIBUTION: Endemic to sw. MT.

MONTANA COUNTIES: Beaverhead, Deerlodge, Granite, Ravalli.

PHYSIOGRAPHIC DISTRIBUTION:
Anaconda-Pintlar, Bitterroot, Pioneer, and Sapphire Mtns.

NATIONAL FOREST(S): Beaverhead, Bitterroot, Deerlodge.

HABITAT:
Vernally moist, open soil in meadows and on rock ledges, near or above timberline; 2400-3150 m (7875-10325 ft).

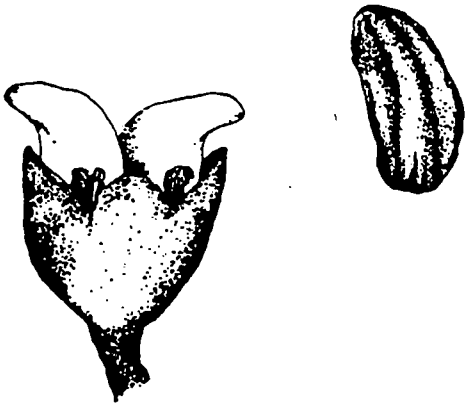
DESCRIPTION:
Storm saxifrage is a small perennial with a basal rosette of leaves and 1-few naked stems, 3-8 cm (1-3 in) tall, arising from a simple or branched rootstock. The glabrous, mostly entire-margined leaves are 5-25 mm long, and linear to egg-shaped with an indistinct petiole. The white flowers are borne in 1-few compact clusters at the top of the stem. The separate sepals are spreading or erect and 1-3 mm long. The 5 separate petals are approximately 1 mm long, always shorter than the sepals. The anthers are orange. The fruit is a two-lobed capsule. Flowering in June and July.

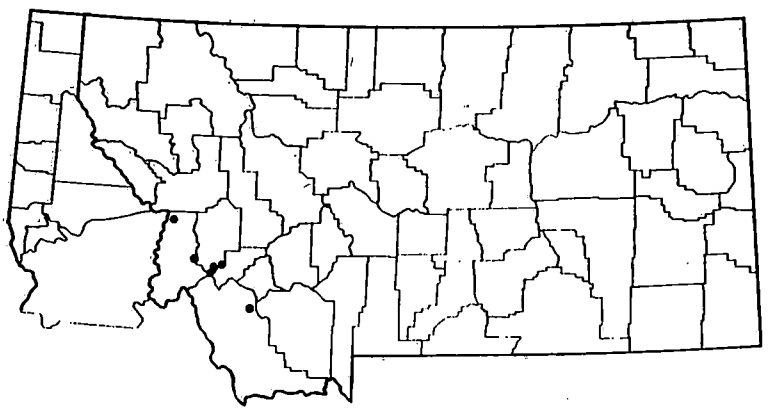
Saxifraga rhomboidea, S. integrifolia, S. oregana, and S. occidentalis are similar species that may occur in similar alpine habitats. Saxifraga tempestiva can be distinguished by the combination of small size, more nearly linear leaves, and petals that are smaller than the sepals, rather than longer or absent.

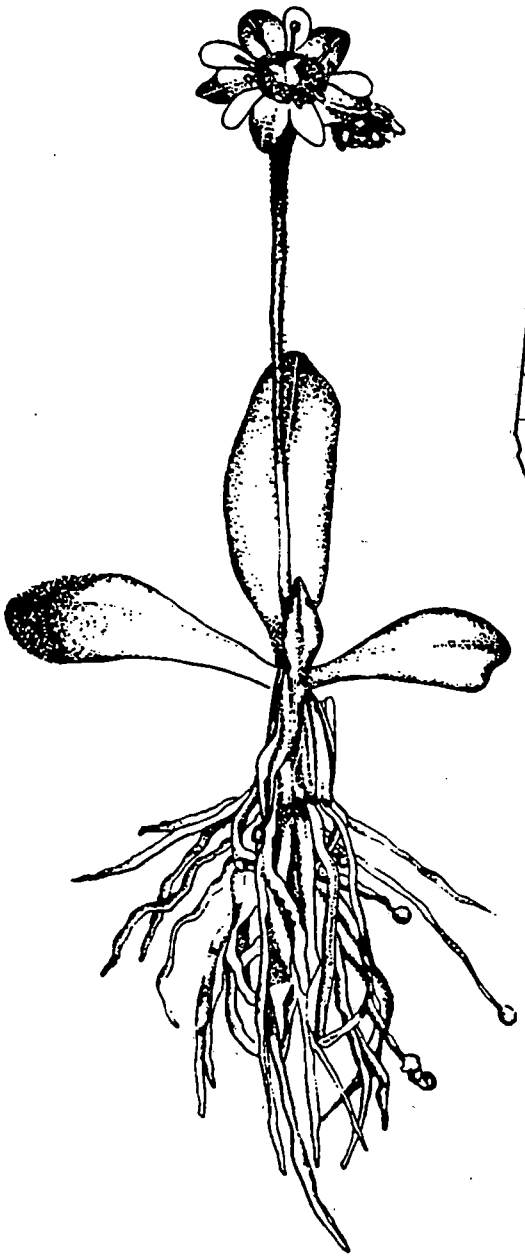
COMMENTS:
This species is endemic to Montana. It has been found in nine areas rangewide.

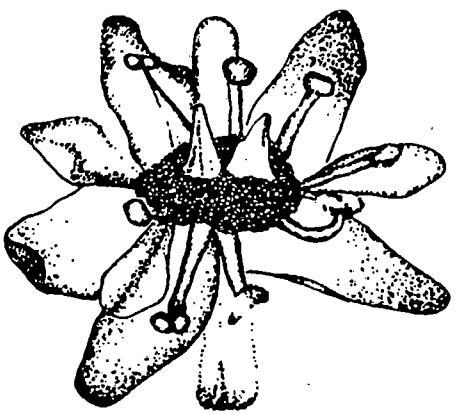
7/88

SAXIFRAGA TEMPESTIVA









SELAGINELLA WATSONII Underw.
Watson's Selaginella

FAMILY: Selaginellaceae (Spike Moss Family)

SYNONYMS: None.

USFS REGION 1 STATUS: MT - SENSITIVE.

USFWS STATUS: None.

MONTANA STATUS: Threatened.

GLOBAL AND STATE RANK: G4G5/S1

GLOBAL DISTRIBUTION:
UT, NV, and c. and s. CA, with single isolated stations in the Wallowa Mtns. of OR, and Pioneer Mtns. of MT.

MONTANA COUNTIES: Beaverhead.

PHYSIOGRAPHIC DISTRIBUTION: Pioneer Mtns.

NATIONAL FOREST(S): Beaverhead; possibly occurring on Deerlodge.
HABITAT:
Exposed, rocky sites at middle and upper altitudes in the mountains, sometimes above timber line; 2744 m (9000 ft) in MT.

DESCRIPTION:
These are low, mat-forming plants, superficially resembling mosses. The prostrate stems with erect or ascending branches form cushions up to 10 cm (4 in) wide. The small, sessile leaves are crowded and arranged in spirals around the stem. They are linear to egg-shaped and up to 2.5 mm long, with a white needle-like tip 1/4-1/3 as long as the blade. The spores are borne in spore sacs on the undersides of specialized leaves (sporophylls) that form a four-sided cone at the tip of some stems. The sporophylls are usually broader than the vegetative leaves and are obviously keeled on the back.

This species is difficult to distinguish from the more widespread Selaginella densa, which can occur in the same habitat. S. densa has longer leaves on the lower or convex side of the branch, while S. watsonii has leaves all about equal length on the same level of the branch.

COMMENTS:
The single known location for this species in Montana, on Comet Mountain in the Pioneer Range, has not been verified since 1921. This site is widely disjunct from the main range of the species.

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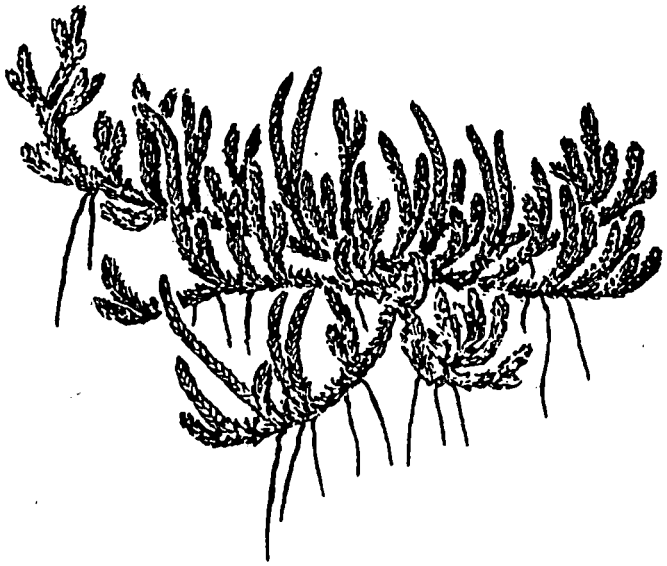
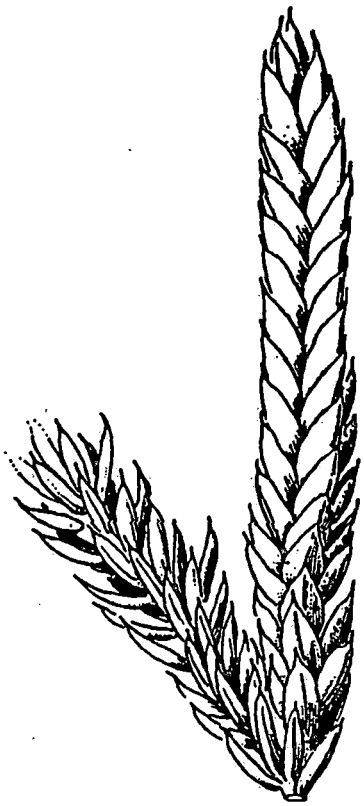
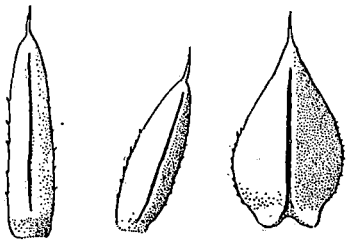
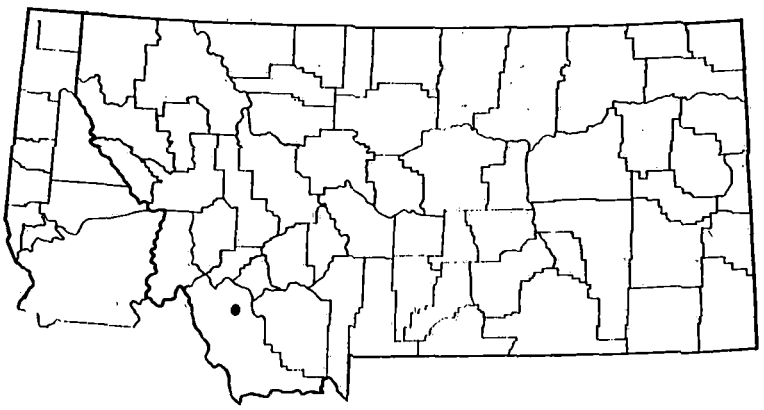
SELAGINELLA WATSONII









SHOSHONEA PULVINATA Evert & Constance
Shoshonea

FAMILY: Apiaceae (Carrot Family)

SYNONYMS: None.

CITATION:
Evert, E.F. and L. Constance. 1982. Shoshonea pulvinata, a new genus and species of Umbelliferae from Wyoming. Systematic Botany 7(4):471-475.

USFS REGION 1 STATUS: MT - SENSITIVE.

USFWS STATUS: C2

MONTANA STATUS: Sensitive.

GLOBAL AND STATE RANK: G2G3/S1

GLOBAL DISTRIBUTION: Southcentral MT, nw. WY.

MONTANA COUNTIES: Carbon.

PHYSIOGRAPHIC DISTRIBUTION: Beartooth Mtns., Pryor Mtns.

NATIONAL FOREST(S): Custer.

HABITAT:
Open, windswept limestone outcrops, ridgetops, and canyon rims, in thin rocky soils; 2070-2380 m (6800-7800 ft) in MT.

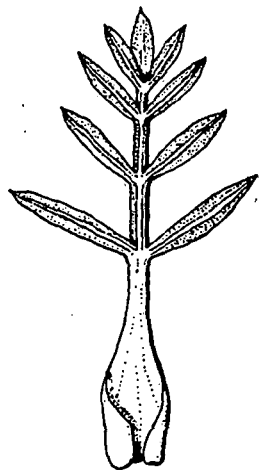
DESCRIPTION:
This is a low, mat-forming, herbaceous, long-lived perennial. The plants have a woody taproot and branching underground stems. The aboveground stems are 2-8 cm (1-3 in) in length, and usually clothed at the base with the remnants of the previous year's leaf sheaths. The leaves are approximately 5-25 mm long and 3-20 mm wide, with a petiole approximately half the length of the leaf. The leaf blades are oddly pinnate with 5-11 divisions, and oblong to oval in outline. The leaf petioles are swollen and papery at the base. The herbage is glabrous to somewhat roughened. The smallest flower clusters consist of a number of stalked flowers attached at a single point (simple umbels). These clusters are, in turn, stalked and attached at a single point to form compound umbels. The flowers in these umbels are small (approximately 3 mm diameter), with 5 light yellow peals attached at the top of the ovary. The fruits are approximately 2-4 mm long, slightly roughened to the touch, and without wings. Flowering late June through July.

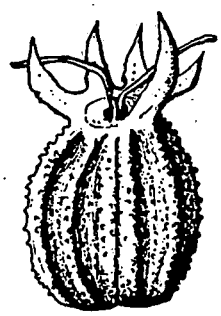
In open habitats, this species forms dense cushions, and cannot be mistaken for any other member of the Parsley Family in our area. In partially shaded sites, the cushion-forming habit is not so strongly expressed and Shoshonea can be mistaken for species of Musineon, Cymopterus, and Lomatium. A technical key should be consulted to separate these groups.

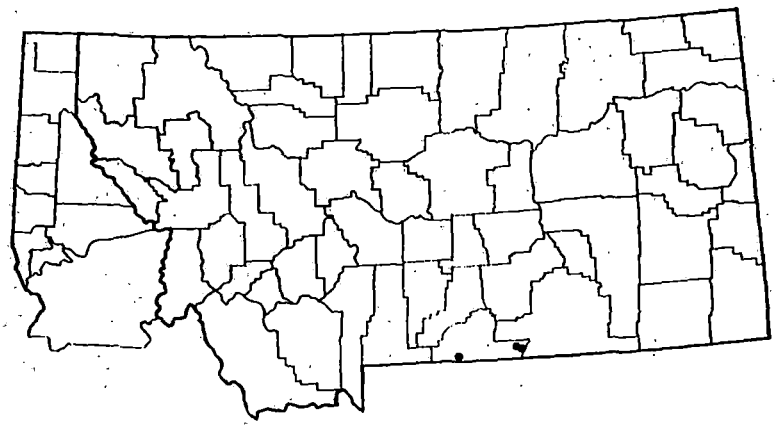
COMMENTS:
This taxon was described as both a new genus and species in 1982. It is more frequent within the Wyoming portion of its range, and barely extends into southcentral Montana.

7/88

SHOSHONEA PULVINATA







THALICTRUM ALPINUM L.
Alpine Meadowrue

FAMILY: Ranunculaceae (Buttercup Family)

SYNONYMS: None.

USFS REGION 1 STATUS: MT - SENSITIVE.

USFWS STATUS: None.

MONTANA STATUS: Sensitive.

GLOBAL AND STATE RANK: G4G5/S1

GLOBAL DISTRIBUTION:
Circumpolar, south to Quebec and Gaspe, and in the western mountains to CA, NV, and CO.

MONTANA COUNTIES: Beaverhead.

PHYSIOGRAPHIC DISTRIBUTION: Centennial Valley and adjacent areas.

NATIONAL FOREST(S):
Beaverhead; possibly occurring on Deerlodge, Gallatin, Helena, Lewis & Clark.

HABITAT:
On hummocks beneath low shrubs in moist, alkaline meadows, in the montane and subalpine zones; 1875-2125 m (6500-7000 ft) in MT.

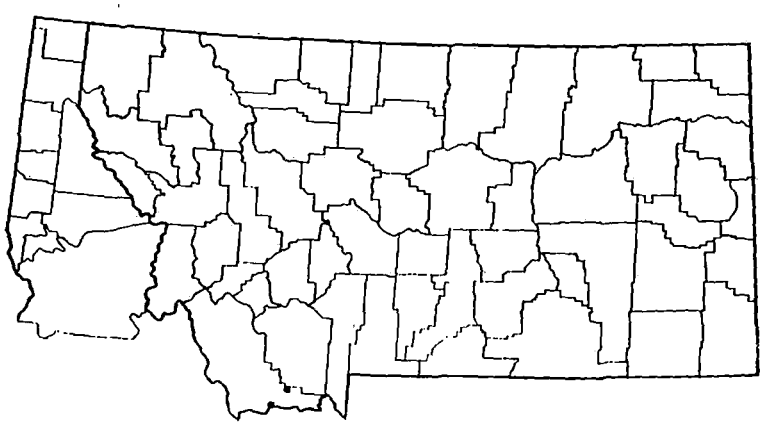
DESCRIPTION:
Alpine meadowrue is a small perennial herb, with mostly simple and nearly leafless stems 3-18 cm (1-7 in) tall from extensive, slender rhizomes. The leaves have a slender petiole and are twice-pinnately divided into broad, 3-lobed segments 3-8 mm long. The herbage is glabrous (occasionally glandular) and covered with a thin bluish wax. The flowers have both anthers and pistils and are borne on short, nodding stalks in a narrow, terminal inflorescence. The 5 small sepals are purplish and fall soon after opening. Petals are lacking. The 2-4 fruits (achenes) are narrowly elliptic in outline, 2-4 mm long and prominently ribbed. Flowering in late May and June.

The small size, and flowers with both anthers and pistils, distinguish this species from all other members of the genus.

COMMENTS:
This plant seems to be rare, even within its restricted habitat. Only two Montana populations are known.

7/88

THALICTRUM ALPINUM



VIOLA RENIFOLIA Gray
Kidney-leaved Violet

FAMILY: Violaceae (Violet Family)

SYNONYMS: None.

USFS REGION 1 STATUS: MT - SENSITIVE.

USFWS STATUS: None.

MONTANA STATUS: Sensitive.

GLOBAL AND STATE RANK: G5/S1

GLOBAL DISTRIBUTION:
B.C. and WA to ne. U.S., south in the Rocky Mtns. to CO.

MONTANA COUNTIES: Flathead, Glacier, Missoula.

PHYSIOGRAPHIC DISTRIBUTION:
Flathead, Whitefish, and Swan Mtns., Glacier National Park.

NATIONAL FOREST(S):
Flathead; possibly occurring on Kootenai, Lewis & Clark, Lolo.

HABITAT:
Swampy or boggy forests in the montane zone; 900-1525 m (3000-5000 ft).

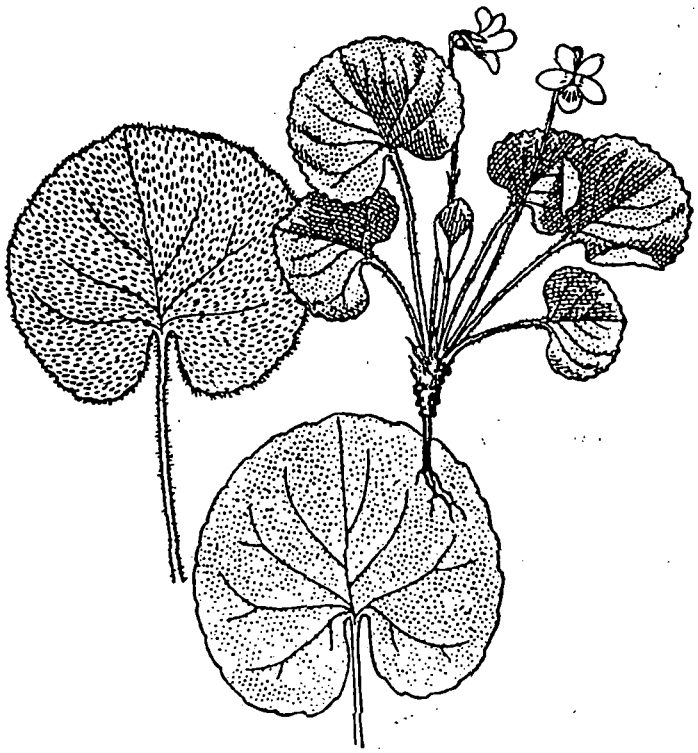
DESCRIPTION:
This perennial violet is without stems or rhizomes. The leaves and flower stalks arise from a short rootstock. The leaves have petioles 3-15 cm (1-6 in) long and blades that are orbicular and broadly heart-shaped at the base, coarsely toothed, and 2-6 cm (1-2 in) wide. The foliage is sparsely to heavily pubescent. The flower stalks are shorter than the leaves. The flowers are white and 10-15 mm long. The petals are glabrous within, and the lower three are lined with purple. Flowering in June and early July.

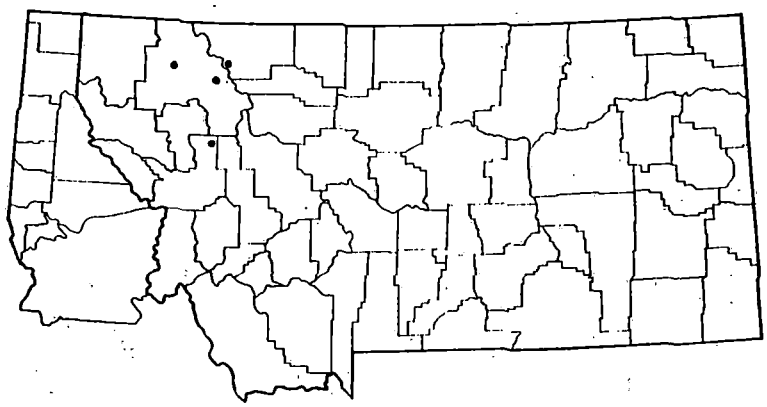
Viola palustris and V. macloskeyi are white-flowered, stemless species that could occur in the same habitat, but both have stolons, while V. renifolia does not.

COMMENTS:
This species is threatened by timber harvesting of its mesic forest habitat.

7/88

VIOLA RENIFOLIA





AGOSERIS LACKSCHEWITZII sp. nov. ined. Moseley & Henderson
Pink Agoseris

FAMILY: Asteraceae (Sunflower Family)

SYNONYMS: None.

USFS REGION 1 STATUS: MT - WATCH.

USFWS STATUS: None.

MONTANA STATUS: Sensitive.

GLOBAL AND STATE RANK: G2/S1

GLOBAL DISTRIBUTION: East-central ID, western MT; regional endemic.

MONTANA COUNTIES: Deer Lodge, Madison, Park, Silver Bow; historically known in Cascade.

PHYSIOGRAPHIC DISTRIBUTION: Anaconda-Pintlar, Tobacco Root, and Crazy Mtns.; near Continental Divide southwest of Butte.

NATIONAL FOREST(S): Beaverhead, Deerlodge, Gallatin, Lewis & Clark; possibly occurring on Custer, Helena.

HABITAT: Subalpine wet meadows where soil is saturated throughout growing season, 2590-2900 m (8,500-9,500 ft).

DESCRIPTION: Taprooted perennial with milky sap. The hairless leaves are clustered at the base, and there are 1-several leafless stems, 10-60 cm (4-24 in) tall. Leaves taper gradually to a long petiole, are narrowly lance-shaped, 5-25 cm (2-10 in) long, and 10-25 mm wide. Flower heads resemble those of the common dandelion, are solitary at the ends of the stems, and are composed entirely of deep pink to light purple ray flowers, 15-20 mm long. Involucral bracts are narrowly lance-shaped, 10-15 mm long, and tinged with purple. Fruits resemble those of the dandelion. They are spindle-shaped and the top tapers to a slender beak to which numerous long, white bristles are attached. Flowering in July and August.

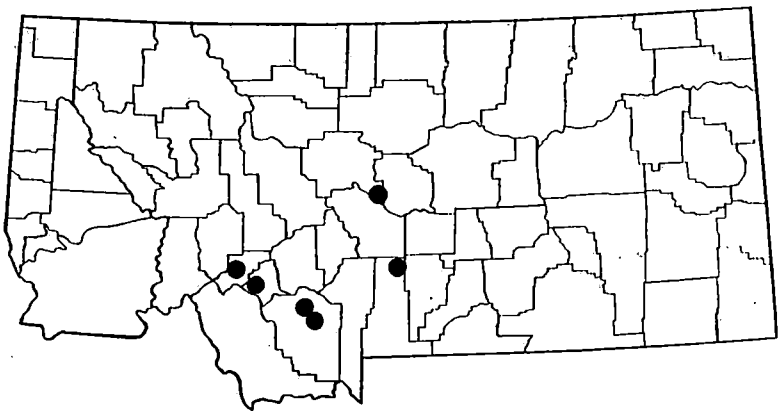
Vegetatively, this plant resembles other members of the genus Agoseris and species of Microseris, but it can be distinguished by its pink flowers.

COMMENTS: This new species is being described by R. Moseley and D. Henderson. The five recently documented sites in Montana are in widely separated localities.

12/89

AGROSERIS LACKSCHEWITZII

NO ILLUSTRATION AVAILABLE



AQUILEGIA BREVISTYLA Hook.
Short-styled Columbine

FAMILY: Ranunculaceae (Buttercup Family)

SYNONYMS: None.

USFS REGION 1 STATUS: MT - WATCH.

USFWS STATUS: None.

MONTANA STATUS: Sensitive.

GLOBAL AND STATE RANK: G5/S1

GLOBAL DISTRIBUTION: AK and northern B.C., south to MT and SD.

MONTANA COUNTIES: Judith Basin; records of uncertain identity from Glacier, Sweet Grass.

PHYSIOGRAPHIC DISTRIBUTION: Little Belt Mountains; possibly Glacier National Park, Absaroka Mtns.

NATIONAL FOREST(S): Lewis & Clark; possibly occurring on Gallatin.

HABITAT: Open woods and streambanks at mid-elevations in the mountains, 1525-1830 m (5,000-6,000 ft).

DESCRIPTION: Slender, sparingly branched, perennial with stems up to 80 cm (30 in) tall. The lower stem is lightly hairy and the upper stem is glandular. Basal leaves have long petioles with blades that are twice divided into three parts. Margins of the leaves are lobed and wavy. The few stem leaves are lobed and nearly without petioles. The typical columbine flowers are 15-25 mm long with blue or purple reflexed sepals and yellowish-white, horn-shaped petals. The bluish spurs of the petals are curved inward at the tip and 6-8 mm long. Stamens and styles barely protrude beyond the petals. The five-lobed seed capsules are hairy. Flowering in July.

This species can be told from other blue-flowered columbines in Montana by the incurved tips of the petal spurs.

COMMENTS: The identity of the plants reported from Glacier National Park and Sweet Grass County remains uncertain. Hybrids between A. jonesii and A. flavescens have been mistaken for A. brevistyla.

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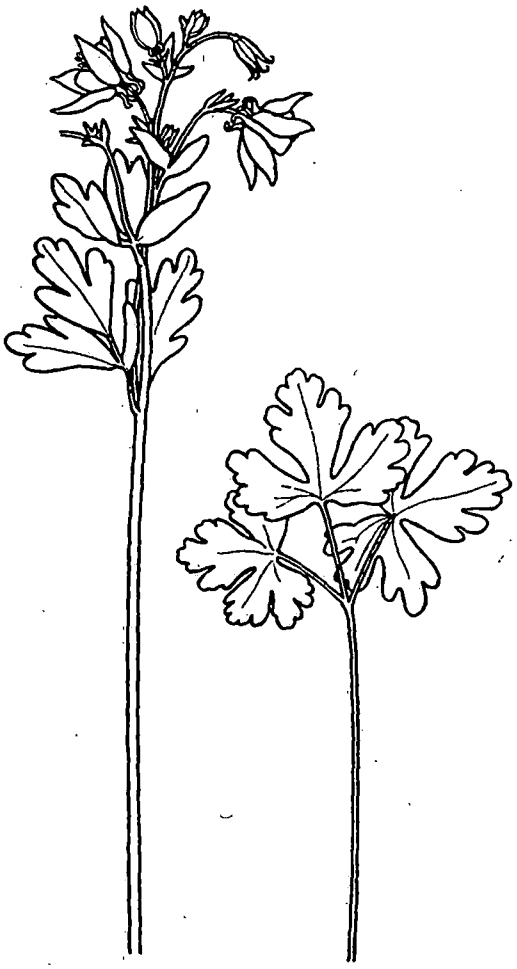
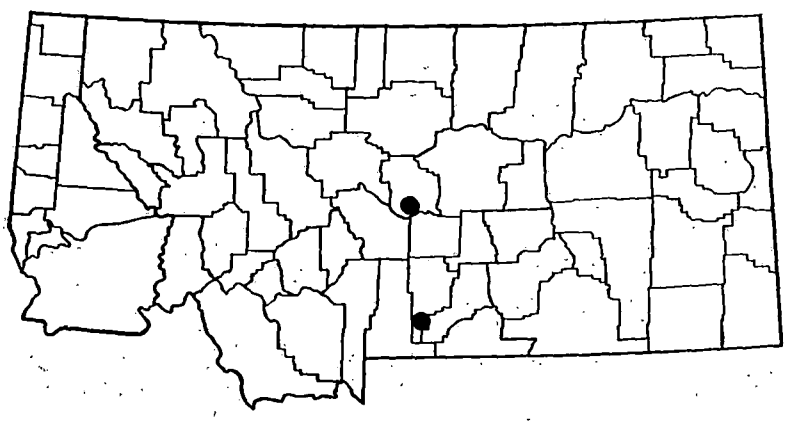
AQUILEGIA BREVISTYLA





ARABIS FECUNDA Rollins
Sapphire Rockcress

FAMILY: Brassicaceae (Mustard Family)

SYNONYMS: None.

USFS REGION 1 STATUS: MT - WATCH.

USFWS STATUS: C2.

MONTANA STATUS: Threatened.

GLOBAL AND STATE RANK: G2/S2

GLOBAL DISTRIBUTION: Southwestern MT; state endemic.

MONTANA COUNTIES: Beaverhead, Ravalli, Silver Bow.

PHYSIOGRAPHIC DISTRIBUTION: Pioneer Range, Sapphire Range.

NATIONAL FOREST(S): Beaverhead; possibly occurring on Bitterroot, Deerlodge, Lolo.

HABITAT: Open, rocky, often eroding slopes developed from calcareous parent material in the foothill and montane zones, 1370-2150 m (4,500-7,000 ft).

DESCRIPTION: Small perennial with 1-many clusters of basal leaves from a branched rootcrown and 1-many (usually 3 or more) unbranched flowering stems up to 30 cm (12 in) high. The spoon-shaped or lance-shaped basal leaves are 10-30 mm long and 2-4 mm wide, with entire margins or a few shallow lobes toward the tip. Stem leaves are smaller and clasping. Usually two distinct types of basal leaves are produced: large, broad leaves in the fall, and narrow leaves in the spring. Leaves and stems are grayish-white with a dense cover of small, branched hairs. The several-many white or bluish-tinged flowers are borne in an unbranched spike-like inflorescence. Flowers are tightly clustered at first, but become further apart in fruit. Flowers have four petals, 9-13 mm long and 3-5 mm wide, and densely hairy sepals, 6-7 mm long and about 2 mm wide. The grayish-hairy, bean-shaped fruits are 3-5 cm (1-2 in) long and 1-2 mm wide. They are held nearly erect when mature and have two narrow chambers with a single row of small seeds in each one. Flowering April through early June, mature fruit in May-June.

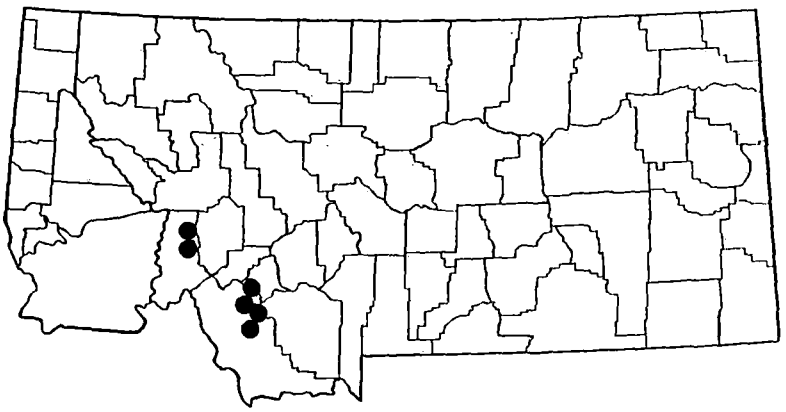
Arabis is a difficult genus with many similar-appearing species. Sapphire rockcress can be distinquished from other species in Montana by the nearly erect, densely hairy fruits and the two different types of basal leaves.

COMMENTS: This Montana endemic is threatened by exotic weed encroachment, livestock grazing, and mining activity.

12/89

ARABIS FECUNDA

NO ILLUSTRATION AVAILABLE



ARENARIA KINGII (Wats.) Jones
King's Sandwort

FAMILY: Caryophyllaceae (Pink Family)

SYNONYMS: None.

USFS REGION 1 STATUS: MT - WATCH.

USFWS STATUS: None.

MONTANA STATUS: Sensitive.

GLOBAL AND STATE RANK: G4/S1

GLOBAL DISTRIBUTION: Southeast OR to CA, east to southwest MT, western WY and UT. Peripheral in Montana.

MONTANA COUNTIES: Beaverhead, Broadwater.

PHYSIOGRAPHIC DISTRIBUTION: Beaverhead and Big Belt Mountains

NATIONAL FOREST(S): Beaverhead; possibly occurring on Bitterroot, Deerlodge.

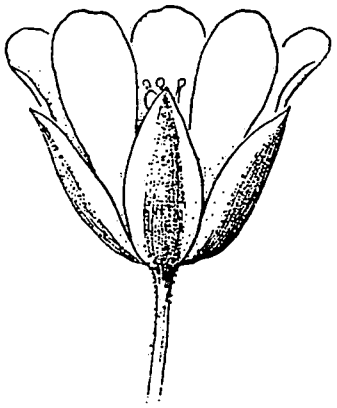
HABITAT: Rocky soil of open slopes in the subalpine and alpine zones, 1585-2925 m (5,200-9,600 ft).

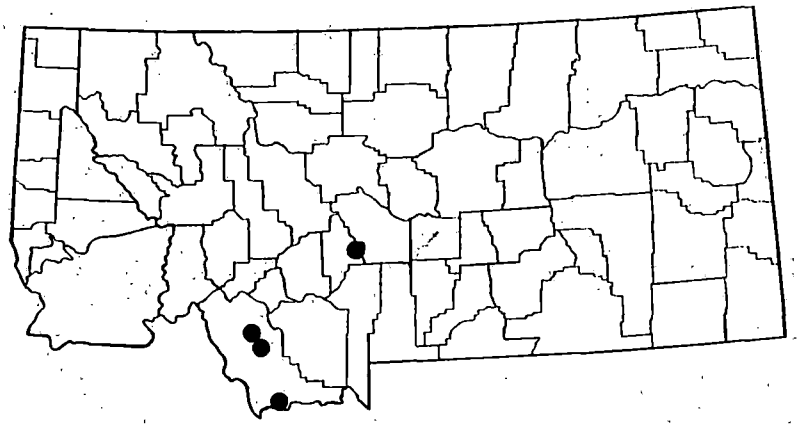
DESCRIPTION: Low perennial forming loose mats with stems arising from a branched rootcrown. The numerous flowering stems are 10-30 cm (4-8 in) tall. Narrow, sharp-pointed leaves are 1-8 cm (0.5-3 in) long, opposite each other on the stem, and clustered toward the base of the plant. Foliage is hairless or, more commonly, covered with fine, short hairs that may be gland-tipped in the inflorescence. Several white flowers are borne in an openly branched inflorescence at the end of stems. Broadly lance-shaped sepals are 3-6 mm long, often purplish tinged, and sharply pointed with a single midvein. Petals are rounded or lobed at the tip and 5-12 mm long. Flowering in June and July.

This species is difficult to separate from the more common A. congesta and A. capillaris, but can usually be distinguished by the combination of sharp-pointed sepals and openly branched inflorescence.

12/89

ARENARIA KINGII





ASPLENIUM TRICHOMANES L.
Maidenhair Spleenwort

FAMILY: Polypodiaceae (Fern Family)

SYNONYMS: Chamaefilix trichomanes Farw.

USFS REGION 1 STATUS: MT - WATCH; N. ID - SENSITIVE.

USFWS STATUS: None.

MONTANA STATUS: Sensitive.

GLOBAL AND STATE RANK: G5/S1

GLOBAL DISTRIBUTION: Circumboreal, extending south in America, to OR, AZ, TX,and GA, absent from CA, NV, and UT.

MONTANA COUNTIES: Historically known in Flathead, reported for Lake.

PHYSIOGRAPHIC DISTRIBUTION: Northwest MT.

NATIONAL FOREST(S): Possibly occurring on Beaverhead, Deerlodge, Flathead, Helena, Kootenai, Lewis & Clark.

HABITAT: Moist rock crevices and talus slopes at mid-elevations in the mountains.

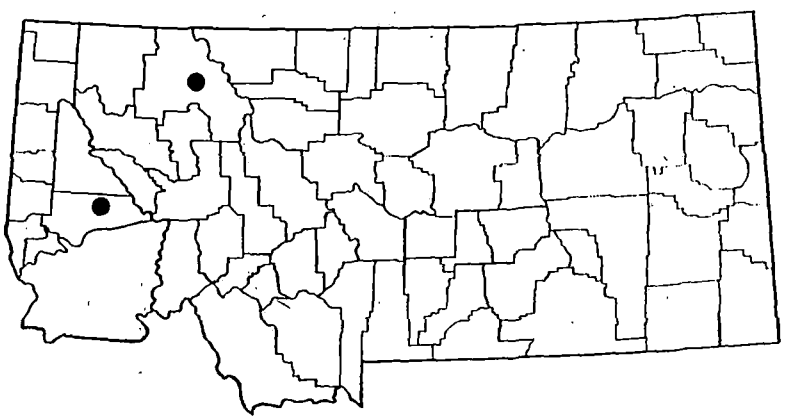
DESCRIPTION: This fern has short rhizomes, and hairless, evergreen fronds clustered from the base of the plant. Each frond is 7-35 cm (3-14 in) long, and is pinnately divided into numerous pinnae (leaflets) arranged alternately on the shiny, reddish-brown central axis (rachis) of the frond. The naked petioles and rachises tend to persist after the pinnae have fallen. Each pinna is 5 mm wide, entire-margined below, but shallowly lobed toward the tip. Spores are borne in 1-4 clusters arranged along the veins on the undersides of the pinnae. The spores are partially enfolded by a thin, white tissue (indusium). Mature fronds in July.

This species can be distinguished from the more common A. viride by its shiny, reddish-brown leaf stems.

COMMENTS: This species is known in MT from only one collection (Flathead County), which was taken nearly 100 years ago; it has also been reported for Lake County.

12/89

ASPLENIUM TRICHOMANES



ASTRAGALUS LEPTALEUS Gray
Park Milkvetch

FAMILY: Fabaceae (Pea Family)

SYNONYMS: None.

USFS REGION 1 STATUS: MT - WATCH.

USFWS STATUS: None.

MONTANA STATUS: Sensitive.

GLOBAL AND STATE RANK: G4/S1

GLOBAL DISTRIBUTION: Western MT south to northwest WY, east-central ID and CO. Sparsely distributed in Montana.

MONTANA COUNTIES: Beaverhead, Lake, Madison, Park.

PHYSIOGRAPHIC DISTRIBUTION: Flathead Lake region, Beaverhead River drainage, southwest mountain ranges.

NATIONAL FOREST(S): Possibly occurring on Beaverhead, Deerlodge, Flathead, Gallatin, Helena, Lewis & Clark, Lolo.

HABITAT: Moist or wet, often alkaline meadows in valley, foothill, and montane zones, 910?-2740 m (3,000?-9,000 ft).

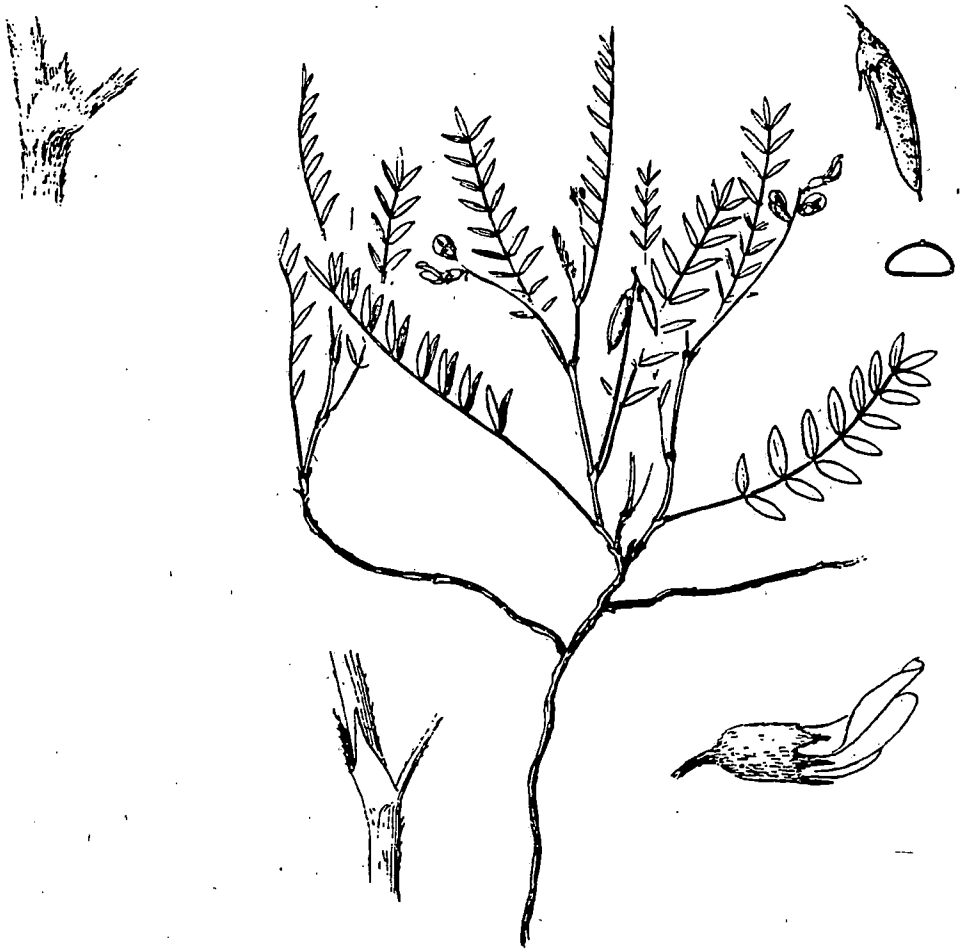
DESCRIPTION: This inconspicuous perennial has a deeply buried taproot and widely creeping underground stems, with above-ground stems that are 5-20 cm (2-8 in) long. Pinnately divided leaves are 2-10 cm (1-4 in) long with 15-23 lance-shaped leaflets. Foliage is bright green and thinly covered with closely appressed hairs. Flowers are shaped like pea flowers and are borne in an open, few-flowered inflorescence. The calyx is 4-5 mm long and has five teeth 1-2 mm long. The upper three petals are white, and the two united lower ones (keel) are tinged with purple. The uppermost petal (banner) is slightly turned back and 8-12 mm long. Pendulous, narrowly elliptic pods are flattened and 8-14 mm long. Flowering late June through early August.

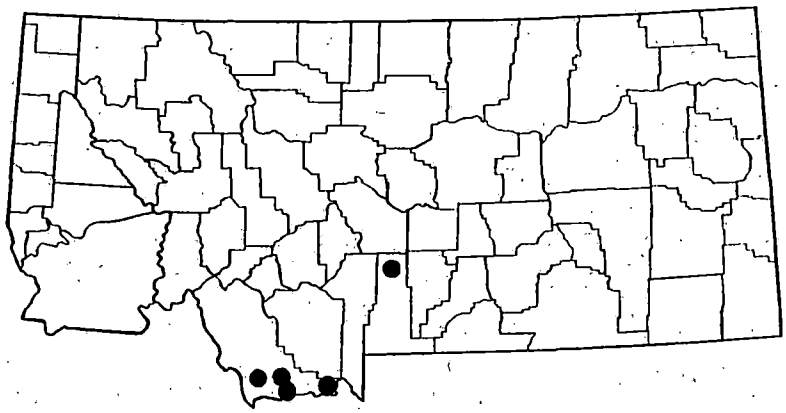
Astragalus is a very large and difficult genus, and a technical key should be consulted for positive identification. The creeping habit and few-flowered inflorescence are good field characters of this species.

COMMENTS: This species is reported by Barneby (1964) for Flathead Lake. The only collections within the last 70 years are from Beaverhead County. Plants are inconspicuous and difficult to find.

12/89

ASTRAGALUS LEPTALEUS





BALSAMORHIZA MACROPHYLLA Nutt.
Large-leaved Balsamroot

FAMILY: Asteraceae (Sunflower Family)

SYNONYMS: None.

USFS REGION 1 STATUS: MT - WATCH.

USFWS STATUS: None.

MONTANA STATUS: Sensitive.

GLOBAL AND STATE RANK: G3G5/S1

GLOBAL DISTRIBUTION: Northern UT, southeast ID (Clark Co.) to the north edge of the Snake River plains, western WY, southwestern MT.

MONTANA COUNTIES: Gallatin.

PHYSIOGRAPHIC DISTRIBUTION: Madison Range, Gallatin Range.

NATIONAL FOREST(S): Possibly occurring on Beaverhead, Gallatin.

HABITAT: Open hills, 2130-2600 m (7,000-8,500 ft).

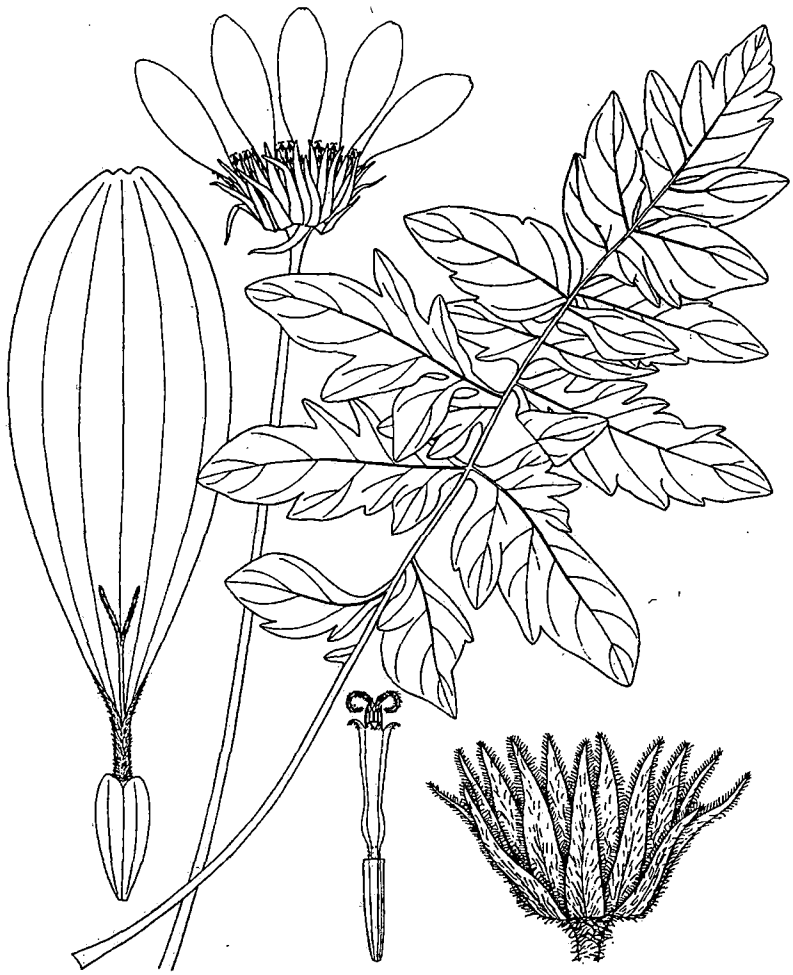
DESCRIPTION: Large perennial with a well-developed taproot and a branched, underground rootcrown. The leafless flowering stems are 30-100 cm (1-3 ft) tall. The larger basal leaves are 30-60 cm (1-2 ft) long and pinnately divided into entire-margined or coarsely toothed segments 5-12 cm (2-5 in) long. Foliage has short, stiff hairs and/or long, sparse hairs. Large flower heads resemble those of a sunflower and are usually solitary at the ends of stems. Lance-shaped involucral bracts are hairy and 25-50 mm long. The yellow ray flowers are 3-6 cm (1-2 in) long, and the yellow disk flowers are ca. 11 mm long. Hairless achenes (seeds) are lance-shaped and ca. 1 cm long. Flowering late June and early July.

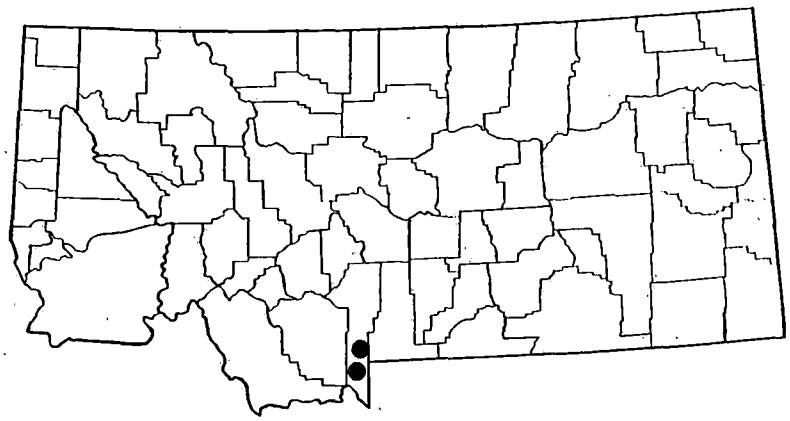
The only other balsamroot in Montana with dissected leaves is B. incana, which has foliage with long, soft, white hairs.

COMMENTS: The two collections in Gallatin County were made in 1928 and 1931; it has not since been collected in Montana.

12/89

BALSAMORHIZA MACROPHYLLA





BOTRYCHIUM CRENULATUM Wagner
Wavy Moonwort

FAMILY: Ophioglossaceae (Adder's-tongue Family)

SYNONYMS: None.

USFS REGION 1 STATUS: MT - WATCH.

USFWS STATUS: C2.

MONTANA STATUS: Endangered.

GLOBAL AND STATE RANK: G1G3Q/S1

GLOBAL DISTRIBUTION: CA, AZ, NV and northwest MT. Disjunct in Montana.

MONTANA COUNTIES: Lake.

PHYSIOGRAPHIC DISTRIBUTION: Upper Flathead River drainage.

NATIONAL FOREST(S): Possibly occurring on Flathead, Kootenai, Lolo.

HABITAT: Moist forests in the valley zone, ca. 940 m (3,100 ft).

DESCRIPTION: Small fern with a solitary stem 5-9 cm (2-4 in) tall. Each stem has a pinnately divided sterile portion that resembles a stem leaf and is 1-2 cm long, with rounded lobes and wavy margins. The fertile portion is 1-12 cm long, with small round spore sacs along the margins. The herbage is hairless and somewhat fleshy. Spore-bearing plants are found in July and August.

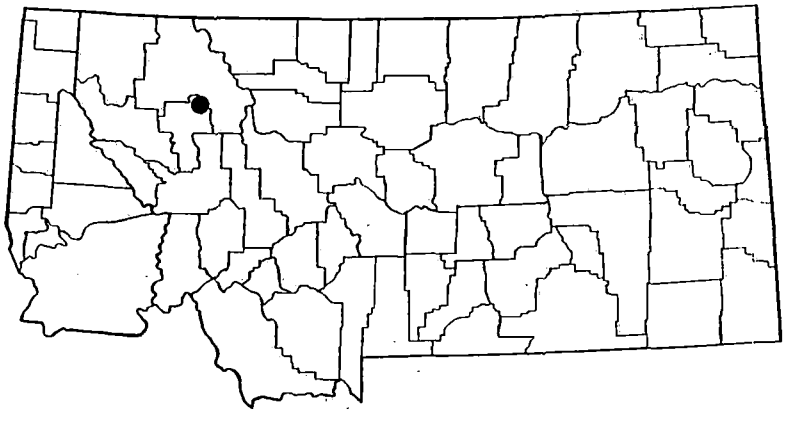
Species of Botrychium are difficult to distinguish. A technical key should be consulted for positive identification. Plants are small and easily overlooked.

COMMENTS: A recent search failed to relocate the only known Montana collection site for this species. Wavy moonwort may occur in successional microhabitats; thus, some populations may be ephemeral.

12/89

BOTRYCHIUM CRENULATUM

NO ILLUSTRATION AVAILABLE



BOTRYCHIUM MINGANENSE Vict.
Mingan Island Moonwort

FAMILY: Ophioglossaceae (Adder's-tongue Family)

SYNONYMS: B. lunaria (L.) Sw. var. minganense (Vict.) Dole; B. lunaria ssp. minganense (Vict.) Calder & Taylor.

USFS REGION 1 STATUS: MT - WATCH; N. ID - SENSITIVE.

USFWS STATUS: None.

MONTANA STATUS: Sensitive.

GLOBAL AND STATE RANK: G4/S1

GLOBAL DISTRIBUTION: Northeastern Canada, south to northeastern US, MI, WI, and ND; AK to Alberta, south to OR, ID, MT, UT, and NV.

MONTANA COUNTIES: Flathead, Glacier, Lake.

PHYSIOGRAPHIC DISTRIBUTION: Northwestern MT, Glacier National Park.

NATIONAL FOREST(S): Flathead; possibly occurring on Kootenai, Lewis & Clark, Lolo.

HABITAT: Moist meadows and woods, in acid to neutral soil; low to high elevations, 915-2135 m (3,000-7,000 ft).

DESCRIPTION: Small fern with a solitary stem 4-28 cm (2-11 in) tall. Each stem has a sterile portion resembling a stem leaf and a fertile portion bearing spores. The sterile portion, 1-10 cm (0.5-4 in) long, is pinnately divided into approximately five pairs of rounded lobes that are relatively remote from each other. The fertile portion, 1-15 cm (0.5-6 in) long, is usually branched and bears clusters of spore sacs along the margin. The yellow-green herbage is hairless and somewhat fleshy. Spore-bearing plants are found in July and August.

Species of Botrychium are difficult to distinguish. A technical key should be consulted for positive identification. Plants often occur beneath taller vegetation and can easily be overlooked.

COMMENTS: This species is similar to B. lunaria, B. simplex, and B. crenulatum. It may occur in successional microhabitats; thus, some populations may be ephemeral.

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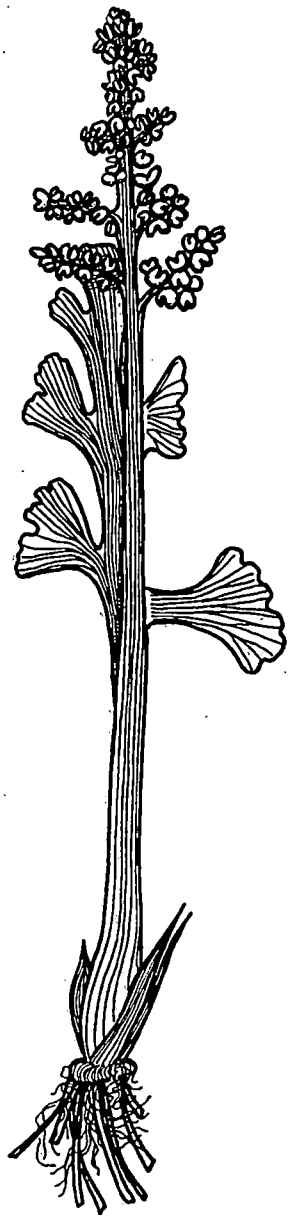
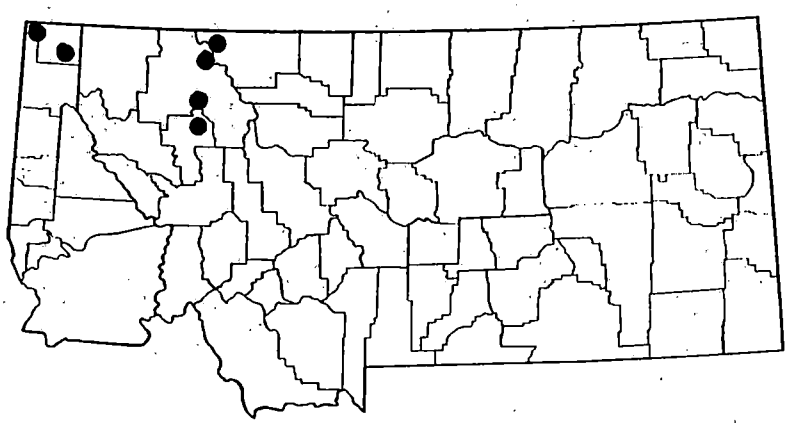
BOTRYCHIUM MINGANENSE





CARDAMINE RUPICOLA (Rydb.) Hitchc.
Cliff Toothwort

FAMILY: Brassicaceae (Mustard Family)

SYNONYMS: None.

USFS REGION 1 STATUS: MT - WATCH.

USFWS STATUS: 3C.

MONTANA STATUS: Limited Distribution.

GLOBAL AND STATE RANK: G2G3/S2S3

GLOBAL DISTRIBUTION: Northwest Montana; state endemic.

MONTANA COUNTIES: Flathead, Lake, Lewis & Clark, Missoula, Powell.

PHYSIOGRAPHIC DISTRIBUTION: Flathead Range, Front Range, Mission Range, and Swan Range.

NATIONAL FOREST(S): Flathead, Helena, Lewis & Clark; possibly occurring on Lolo.

HABITAT: Limestone talus in subalpine and alpine zones, 2130-3050 m (7,000-10,000 ft).

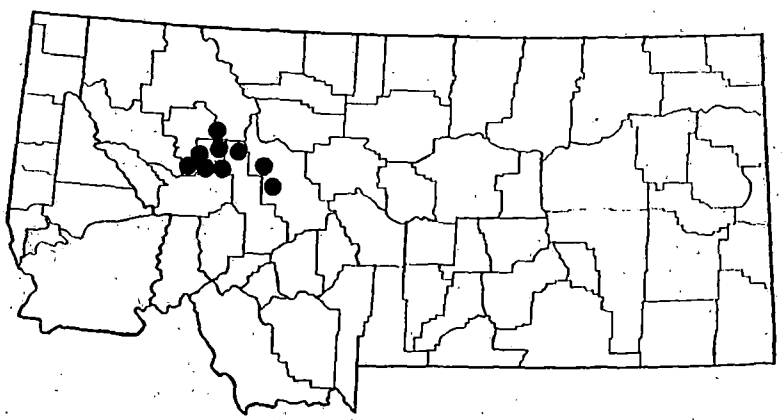
DESCRIPTION: Low perennial with creeping rhizomes and lax or trailing stems 10-30 cm (4-12 in) long. Leaves arising from the rhizomes and those on the lower portion of the flowering stems are deeply divided into 3-7 (usually 5) oval or blunt lance-shaped lobes. Leaves on the upper stem usually have three lobes. Foliage is hairless and somewhat fleshy. The inflorescences at the ends of stems are congested and nearly flat-topped in flower, but become more expanded in fruit. The four sepals are 3-4 mm long, and the four white petals are 8-11 mm long. Narrow, bean-shaped fruits have a long-pointed tip and are 3-4 cm (1-2 in.) long and 1-2 mm broad. Fruits are held nearly erect when mature. Flowering in June and July.

The palmately divided leaves and the elevation talus slope habitat of this species are distinctive.

COMMENTS: This Montana endemic is locally common in the Mission and Swan ranges.

12/89

CARDAMINE RUPICOLA



CAREX LENTICULARIS Michx. var. DOLIA (Jones) Standley
Goose-grass Sedge

FAMILY: Cyperaceae (Sedge Family)

SYNONYMS: C. plectocarpa Hermann; C. enanderi Hulten; C. eurystachya Hermann

USFS REGION 1 STATUS: MT - WATCH.

USFWS STATUS: C2.

MONTANA STATUS: Sensitive.

GLOBAL AND STATE RANK: G5T2/S1

GLOBAL DISTRIBUTION: AK south to B.C., Alberta and western MT. Boreal N. America south to NY, MI, and CA. Peripheral in Montana.

MONTANA COUNTIES: Flathead, Glacier.

PHYSIOGRAPHIC DISTRIBUTION: Lewis Range, Glacier National Park.

NATIONAL FOREST(S): Possibly occurring on Flathead.

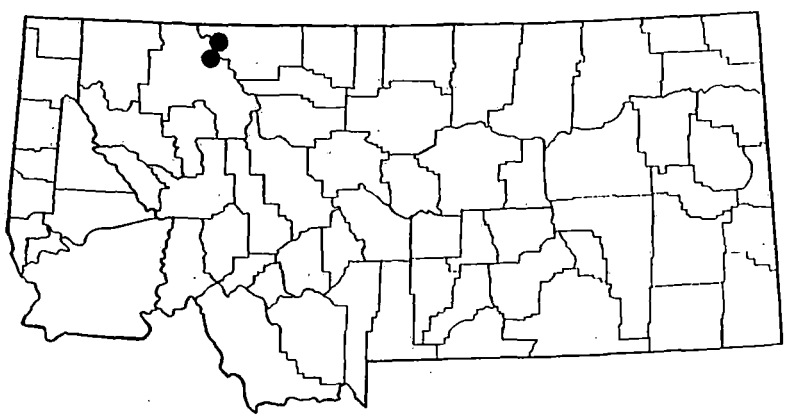
HABITAT: Shallow, wet, stony soil around streams and seeps in the alpine zone, 2040-2440 m (6,700-8,000 ft).

DESCRIPTION: Tufted sedge forming clumps up to 25 cm (10 in) in diameter, with stems that are 8-30 cm (4-12 in) tall. Basal leaves are 10-18 cm (4-7 in) long and ca. 3 mm wide. Stem leaves can be shorter. Dried leaves of the previous year persist at the base of the plant; flowering stems are usually nodding or more often prostrate on the ground. Inflorescence consists of 3-4 oblong spikes in a terminal cluster. Each spike is ca. 15 mm long and 5 mm wide. Lower spikes have only female flowers, but the uppermost spike has male flowers (detected by the presence of anthers) on the bottom half. Spikes usually appear dark brown, but may be almost completely green. Perigynia (fruits) are green with purple spots toward the tip, but are mostly hidden by the purplish or dark brown bracts. Mature fruit in late July and August.

Carex is a very large and difficult genus. Specimens with mature fruit are necessary for positive identification. Perhaps the best field characters are the loose tussocks with the leaves and stems generally growing at a near-horizontal angle to the ground.

COMMENTS: At the present time, the only known locations for this plant in the Continental U.S. are in Glacier National Park. It might be expected in the Flathead, Mission, and Swan ranges. Cronquist (Hitchcock and Cronquist 1973) mistakenly refers this plant to C. eleusinoides (Standley 1985).

CAREX LENTICULARIS var. DOLIA



CAREX MULTICOSTATA Mack.
Many-ribbed Sedge

FAMILY: Cyperaceae (Sedge Family)

SYNONYMS: C. pachycarpa Mack.

USFS REGION 1 STATUS: MT - WATCH.

USFWS STATUS: None.

MONTANA STATUS: Sensitive.

GLOBAL AND STATE RANK: G5/S1

GLOBAL DISTRIBUTION: Central WA to southern CA, eastern OR, ID, and MT.

MONTANA COUNTIES: Beaverhead, Gallatin.

PHYSIOGRAPHIC DISTRIBUTION: Centennial Mtns.

NATIONAL FOREST(S): Possibly occurring on Beaverhead, Deerlodge, Gallatin.

HABITAT: Meadows and open, moist to dry slopes and woods, at moderate elevations, occasionally ascending to near timberline, 1830-3350 m (6,000-11,000 ft).

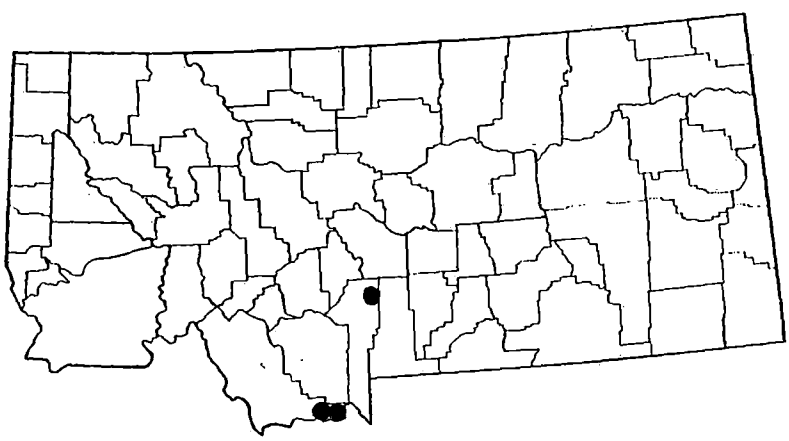
DESCRIPTION: Sedge forming tufts from fibrous roots and with flowering stems up to 60 cm (2 ft) tall. The flat leaves, 2-4 mm wide, are clustered toward the base of the stem and are distinctly shorter than the inflorescence. The 3-7 spikes, 6-10 mm long, are borne in a tight,globe-shaped cluster at the top of the stem. Each spike has male flowers (detected by the presence of anthers) at the bottom and female flowers at the top. Each female flower consists of a dark scale in front of a green to light brown perigynium (fruit); the latter has a rounded base with a tapering neck that is sharply toothed at the top. Perigynia are 4-6 mm long, with thin-edged margins and conspicuous nerves on their face. Mature fruit in July and August.

Carex is a large and difficult genus. Mature fruit and a technical key are essential for positive identification. Many-ribbed sedge is similar to the more common C. microptera, but can be distinguished by the conspicuous nerves on the face of the perigynium.

COMMENTS: Hermann (1970) indicates that this species is plentiful in the mountains of Oregon and California, and is often found in overgrazed meadows.

12/89

CAREX MULTICOSTATA



CAREX OCCIDENTALIS Bailey
Western Sedge

FAMILY: Cyperaceae (Sedge Family)

SYNONYMS: None.

USFS REGION 1 STATUS: MT - WATCH.

USFWS STATUS: None.

MONTANA STATUS: Sensitive.

GLOBAL AND STATE RANK: G4/SU

GLOBAL DISTRIBUTION: MT, WY, CO, and UT, south to NM, AZ, and CA.

MONTANA COUNTIES: Historically known in Beaverhead.

PHYSIOGRAPHIC DISTRIBUTION: Southwestern MT.

NATIONAL FOREST(S): Beaverhead; possibly occurring on Bitterroot, Deerlodge, Gallatin.

HABITAT: Dry habitats, generally at mid-elevations but extending upward to the spruce-fir zone, sometimes to subalpine and alpine habitats, 1520-3350 m (5,000-11,000 ft).

DESCRIPTION: Sedge with short, creeping rootstocks forming loose bunches with sharply triangular flowering stems up to 80 cm (30 in) tall. Leaves are flat with inrolled margins and 1-3 mm wide. The inflorescence consists of 4-10 spikes, tightly clustered toward the top but more remote at the bottom. Each spike is oblong and 15-30 mm long with inconspicuous male flowers (detected by the presence of anthers) at the top. The green to straw-colored perigynia (fruits) point upward in the spike. They are oblong-elliptic, 2-5 mm long, and mostly concealed by the brownish, ovate-triangular scales that have a white margin and a green center. The lens-shaped achene (seed) nearly fills the body of the perigynium. Mature fruit is present in July.

Carex is a large and difficult genus. Mature fruit and a technical key are essential in order to separate western sedge from closely related species.

COMMENTS: The single Montana collection was in Beaverhead County in 1930.

12/89

CAREX OCCIDENTALIS

CASTILLEJA GRACILLIMA Rydb.
Slender Paintbrush

FAMILY: Scrophulariaceae (Figwort Family)

SYNONYMS: C. ampliflora Rydb. (?); C. ardifera Macbr. & Pays.

USFS REGION 1 STATUS: MT - WATCH.

USFWS STATUS: None.

MONTANA STATUS: Sensitive.

GLOBAL AND STATE RANK: G3G4/SU

GLOBAL DISTRIBUTION: Northwest WY and adjacent MT to central ID; possibly eastern B.C.

MONTANA COUNTIES: Historically known in Gallatin, Madison; questionable record in Beaverhead.

PHYSIOGRAPHIC DISTRIBUTION: Yellowstone area, and Jefferson and Madison River drainages.

NATIONAL FOREST(S): Gallatin; possibly occurring on Beaverhead.

HABITAT: Wet meadows and streambanks, (6,700-7,000 ft).

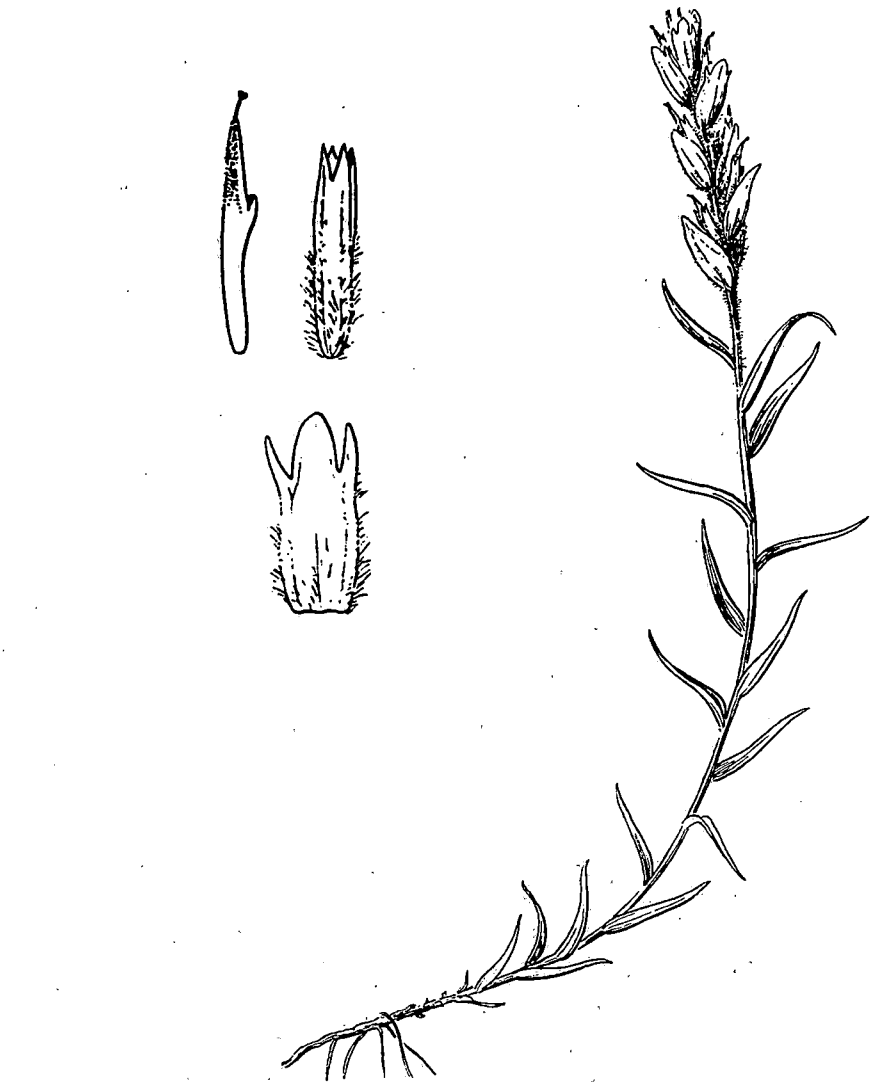
DESCRIPTION: Perennial forb with slender, erect or ascending, usually unbranched stems, 20-50 cm (8-20 in) tall, that often root at the base. The entire-margined leaves are narrowly lance-shaped, and the foliage is hairless or covered with long, soft hairs. Inflorescence is generally yellow, but may be orange or red. Oblong flower bracts are entire-margined or may have a single pair of small lobes near the top. The calyx is 15-22 mm long and deeply divided into two lobes at the top that are each divided again into two smaller, pointed lobes. Petals of the flower are united into a tube below that forms a large, hood-shaped upper portion (galea) and three small lobes or teeth (lip) opposite it. Entire corolla is 20-30 mm long. The galea is densely hairy and less than half as long as the tube, while the lip is green and ca. 1/5 the length of the galea. Flowering late June through August.

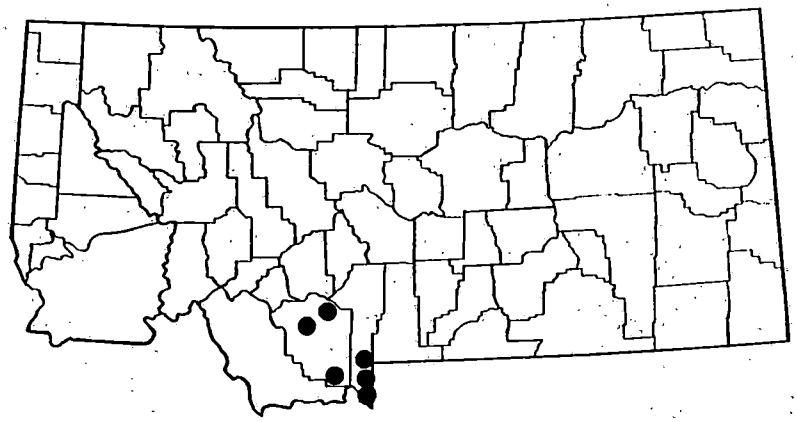
Castilleja is a very difficult group in our area and a technical key should be consulted for positive identification. The combination of creeping habit, yellow inflorescence, entire leaves, and galea that is more than 1/2 the length of the corolla tube will help distinguish this species.

COMMENTS: This species has not been collected in Montana since 1949.

12/89

CASTILLEJA GRACILLIMA





CASTILLEJA LONGISPICA A. Nels.
White Paintbrush

FAMILY: Scrophulariaceae (Figwort Family)

SYNONYMS: Orthocarpus psittacinus Eastw.; Castilleja psittacina Pennell; C. pratensis Heller; C. robiginosa Macbr. & Pays.; C. steenensis Pennell; C. ochracea Eastw.

USFS REGION 1 STATUS: MT - WATCH.

USFWS STATUS: None.

MONTANA STATUS: Undetermined.

GLOBAL AND STATE RANK: G4/SU

GLOBAL DISTRIBUTION: Northeastern CA to eastern OR, central ID, western WY and southwestern MT; Clearwater River drainage in northern ID.

MONTANA COUNTIES: Historically known in Beaverhead, Madison, Ravalli.

PHYSIOGRAPHIC DISTRIBUTION: Sapphire Mtns.

NATIONAL FOREST(S): Bitterroot; possibly occurring on Beaverhead, Deerlodge, Gallatin.

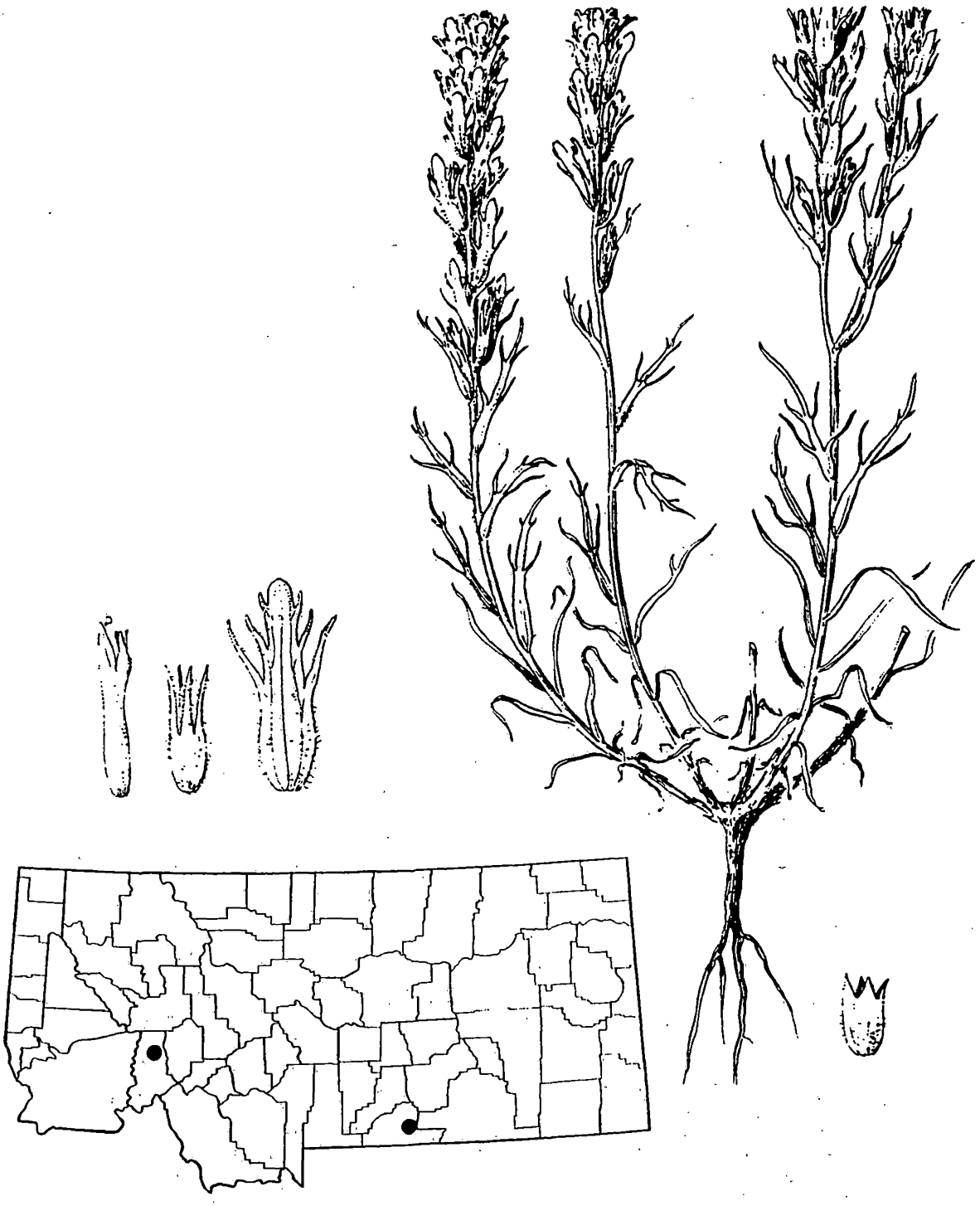
HABITAT: Plains, hills, and slopes, generally associated with sagebrush, often in meadows, ca. 2440 m (8,000 ft).

DESCRIPTION: Perennial paintbrush with purplish stems 10-30 cm (4-12 in) tall that are curved at the base and sometimes branched above. Lower leaves are linear and entire-margined. Upper leaves have one or two pairs of slender, spreading lobes. Stems have long hairs, while the upper leaves are densely short-hairy. The flower bracts are generally yellowish (purplish) and have 1-4 pairs of lobes that are shorter and narrower than the main body. Flowers are distant in the inflorescence. The calyx is 10-20 mm long with four nearly equal triangular lobes at the top. Petals of the flower are united into a tube below that forms a hood-shaped upper portion (galea) and a lower lip with three small lobes or teeth. The entire corolla is yellow, 15-20 mm long, and more or less hairy. The lower lip is strongly pouched and nearly as long as the galea. Flowering in June and July.

Castilleja is a very difficult group in our area, and a technical key should be consulted for positive identification. The combination of yellow flowers, prominent lower lip, and equally four-lobed calyx should separate this species from others occurring at lower and mid-elevations.

COMMENTS: Most of the Montana collections of this species are old (1899), and sites have not been recently verified. It was last collected in the state in 1959.

CASTILLEJA LONGISPICA



CIRSIUM LONGISTYLUM Moore & Frankton
Long-styled Thistle

FAMILY: Asteraceae (Sunflower Family)

SYNONYMS: None.

USFS REGION 1 STATUS: MT - WATCH.

USFWS STATUS: None.

MONTANA STATUS: Sensitive.

GLOBAL AND STATE RANK: G2Q/S2

GLOBAL DISTRIBUTION: Central MT; state endemic.

MONTANA COUNTIES: Broadwater, Cascade, Judith Basin, Meagher.

PHYSIOGRAPHIC DISTRIBUTION: Little Belt Mtns., one site in Big Belt Mtns.

NATIONAL FOREST(S): Helena, Lewis & Clark.

HABITAT: Meadows, slopes and roadsides, at mid-elevations in the mountains, 1425-2450 m (4,680-8,040 ft).

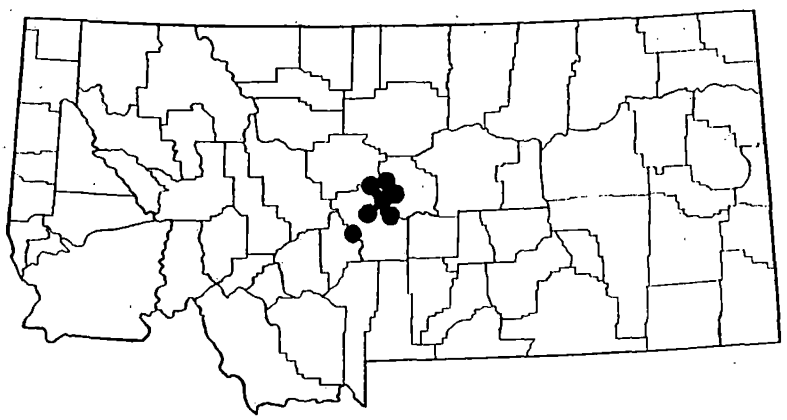
DESCRIPTION: This thistle has simple or branched stems that are 50-60 cm (20-24 in) tall and up to 15 mm thick at the base. Plants are perennial, producing daughter rosettes that live for 2 or more years. Basal leaves are shallowly lobed, moderately spiny, green and hairless above and densely white-hairy below. Lower leaves are narrowly lance-shaped, up to 15 cm (6 in) long, and lobed to 1/3 or less the leaf width. The smaller upper leaves are more ovate in outline with mostly entire margins and numerous marginal spines. Herbage is covered with long, tangled, white hairs. Inflorescence usually consists of a terminal cluster of 2-several flower heads and a number of side branches, up to 15 cm (6 in) long, with fewer heads. Each flower head is approximately 30 mm high, 25 mm wide, and subtended by a few reduced leaves. Involucral bracts occur in two main series: the outer are narrowly lance-shaped with a yellowish, dilated and fringed apex tipped by a slender spine; the inner bracts are more lance-shaped and longer. White disk flowers are 20-22 mm long. Ray flowers are absent. There are numerous tawny bristles (pappus) at the tip of the achenes (seeds). Flowering in July.

This species can best be told from the closely related C. hookerianum by the dilated and fringed involucral bracts.

COMMENTS: This species is generally well-marked, although there is morphological evidence of hybridization in several populations, especially in disturbed areas. It is thought to be hybridizing with either C. hookerianum or C. tweedyi (G. Ownbey, pers. comm.).

CIRSIUM LONGISTYLUM

NO ILLUSTRATION AVAILABLE



LESQUERELLA KLAUSII Rollins
Divide Bladderpod

FAMILY: Brassicaceae (Mustard Family)

SYNONYMS: None.

USFS REGION 1 STATUS: MT - WATCH.

USFWS STATUS: None.

MONTANA STATUS: Watch list.

GLOBAL AND STATE RANK: G3/S3

GLOBAL DISTRIBUTION: Western MT; state endemic.

MONTANA COUNTIES: Lewis & Clark, Meagher.

PHYSIOGRAPHIC DISTRIBUTION: Big Belt Mtns., Little Belt Mtns., southern Front Range Mtns.

NATIONAL FOREST(S): Helena, Lewis & Clark.

HABITAT: Open shale slopes and gravelly areas, at mid- to fairly high elevations in the mountains, 1220-2165 m (4,000-7,100 ft).

DESCRIPTION: Perennial with a rosette of basal leaves from a taproot and unbranched rootcrown, and stems that are erect or broadly curved at the base. Leaves are broadly spoon-shaped, 15-25 mm long, entire-margined, and have long petioles. Stem leaves are spatula-shaped and 6-9 mm long. Herbage is densely covered with branched hairs. Yellow flowers are borne on curved stalks in a simple, loose inflorescence, 10-30 mm long. The four petals are ca. 10 mm long. Broadly heart-shaped fruits are 5 mm wide, 4 mm long, and densely hairy. Flowering in May and June, mature fruit in May through July.

This species is difficult to distinguish from Physaria geyeri; however, the latter has more deeply notched fruits and appears to be confined to the southwestern part of the state.

COMMENTS: This Montana endemic is locally common at some locations in the Big Belt Mountains and the Rogers Pass area.

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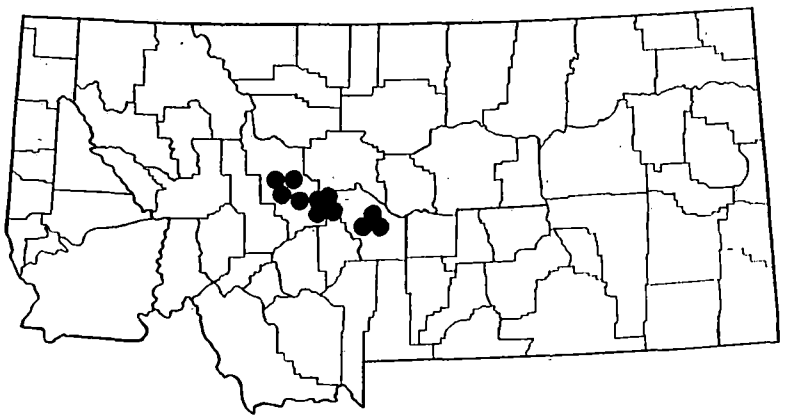
LESQUERELLA KLAUSII

NO ILLUSTRATION AVAILABLE



KOBRESIA SIMPLICIUSCULA (Wahl.) Mack.
Simple Kobresia

FAMILY: Cyperaceae (Sedge Family)

SYNONYMS: None.

USFS REGION 1 STATUS: MT - WATCH.

USFWS STATUS: None.

MONTANA STATUS: Sensitive.

GLOBAL AND STATE RANK: G5/S1

GLOBAL DISTRIBUTION: Circumboreal, south in North America to Newfoundland, Quebec, CO, ID, and OR. Sparsely distributed in Montana.

MONTANA COUNTIES: Glacier.

PHYSIOGRAPHIC DISTRIBUTION: Lewis Range, Glacier National Park.

NATIONAL FOREST(S): Possibly occurring on Custer, Flathead, Lewis & Clark.

HABITAT: Moist tundra in the alpine zone, 2320-2440 m (7,600-8,000 ft).

DESCRIPTION: Sedge-like plant forming small bunches with triangular stems up to 15 cm (6 in) tall. The leaves, which are confined to near the base of the plant, are flat or rolled and ca. 1 mm wide. Dried sheaths and blades persist at the base of the plant. The 3-12 small spikes are borne in a loosely congested inflorescence at the top of the stem. Each spike is 5-15 mm long, is subtended by a small, brown, papery bract, and consists of a few flowers, males (detected by the presence of anthers) above females. Each female flower is composed of a small bract and a scale loosely wrapped around the ovary (seed). Mature fruit in July and August.

This species could easily be mistaken for a true sedge (Carex spp.), but is distinguished by having a bract wrapped around the ovary rather than a closed perigynium. Kobresia myosuroides, which can occur in the same habitat, is distinguished by having a narrower inflorescence.

COMMENTS: At the present time, simple kobresia is known in Montana from only several sites in Glacier National Park. Populations of this species are small and very local.

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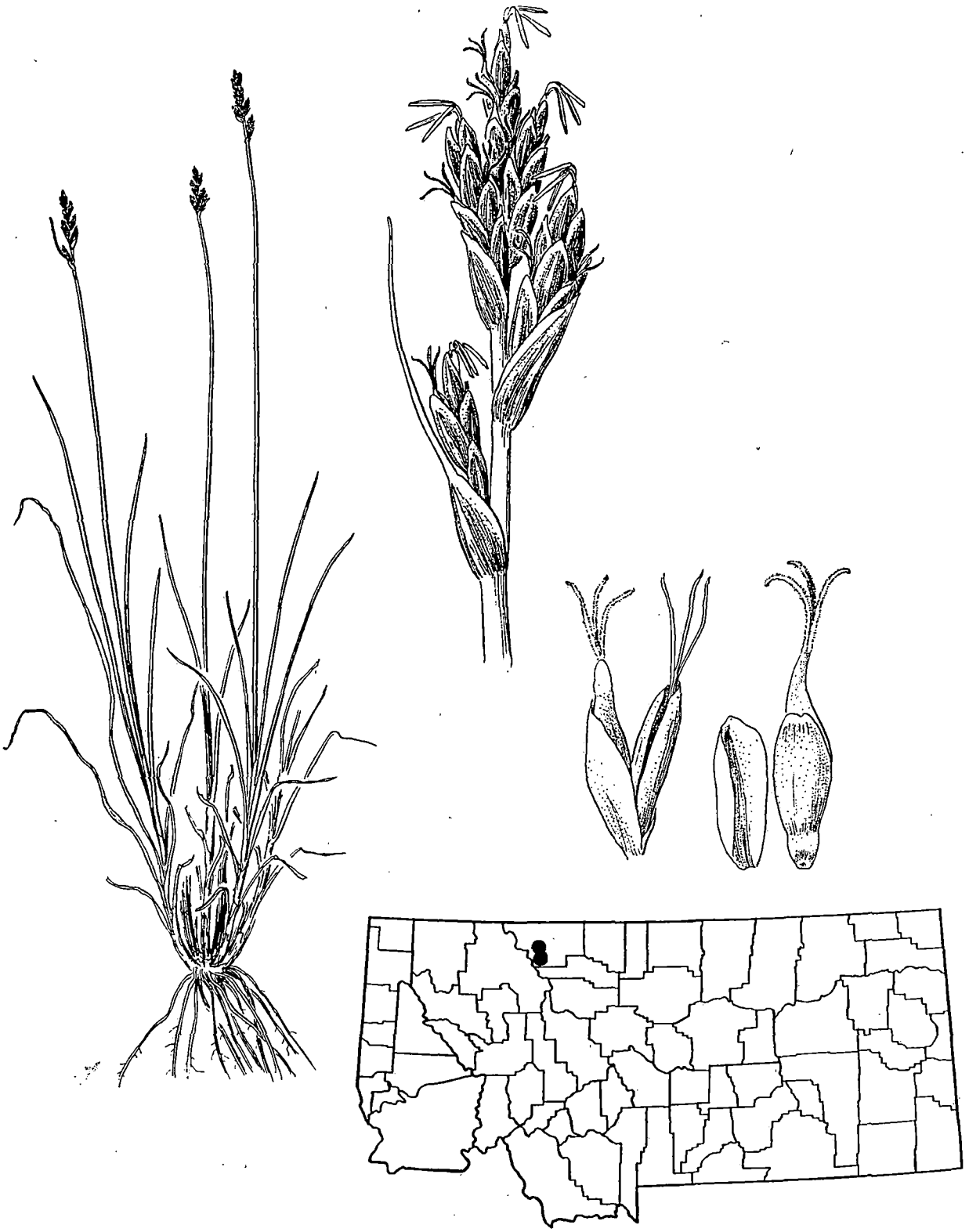
KOBRESIA SIMPLICIUSCULA



JUNCUS HALLII Engelm.
Hall's rush

FAMILY: Juncaceae (Rush Family)

SYNONYMS: None.

USFS REGION 1 STATUS: MT - WATCH.

USFWS STATUS: None.

MONTANA STATUS: Sensitive.

GLOBAL AND STATE RANK: G4G5/S1

GLOBAL DISTRIBUTION: Rocky Mtns., from southwest MT to CO.

MONTANA COUNTIES: Madison, Meagher, Powell, Silver Bow.

PHYSIOGRAPHIC DISTRIBUTION: Big Belt Mtns., Gravelly Range, Madison Range, and Continental Divide in southwest Montana.

NATIONAL FOREST(S): Beaverhead, Gallatin, Helena; possibly occurring on Custer, Deerlodge.

HABITAT: Montane to subalpine, moist to dry meadows and slopes, 2100-2560 m (6,900-8,400 ft).

DESCRIPTION: Bunch-forming rush with erect stems 20-30 cm (8-12 in) tall. The leaves, which are confined to near the base of the plant, are round and up to 15 cm (6 in) long with a groove on the side facing the stem. The uppermost leaf has a sheath surrounding the stem but lacks a blade. The 2-6 flowers are borne in a loosely congested inflorescence subtended by an erect leaf (bract). Because this involucral leaf is erect and round, it appears to be a continuation of the stem, and the inflorescence appears to be lateral rather than terminal. Flowers have six undifferentiated, sharply pointed perianth segments that are light brown with membranous margins and 4-5 mm long. Seed capsules are dark brown with a lobed top. Each seed is ca. 1 mm long with a distinct tail at each end. Mature fruit in July and August.

Juncus is a large and difficult genus and a technical key should be consulted. Mature fruit is necessary for positive determination. The apparently lateral inflorescence, lack of an upper leaf blade, lobed seed capsule, and tailed seeds help distinguish this species.

COMMENTS: This species is sparsely distributed in southwestern Montana; it may be more common than current records indicate.

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JUNCUS HALLII

GENTIANOPSIS SIMPLEX (A. Gray) Iltis
Hiker's Gentian

FAMILY: Gentianaceae (Gentian Family)

SYNONYMS: Gentiana simplex Gray; Anthopogon simplex Rydb.; Gentianella simplex Gillett.

USFS REGION 1 STATUS: MT - WATCH.

USFWS STATUS: None.

MONTANA STATUS: Threatened.

GLOBAL AND STATE RANK: G3G4/S1

GLOBAL DISTRIBUTION: Cascades of OR from Deschutes Co. south to the Sierra Nevada of central CA, east through OR to central ID and southwest MT.

MONTANA COUNTIES: Beaverhead, Missoula.

PHYSIOGRAPHIC DISTRIBUTION: Beaverhead Mtns., Bitterroot Mtns.

NATIONAL FOREST(S): Beaverhead; possibly occurring on Bitterroot, Lolo.

HABITAT: Mountain bogs, meadows, and seepage areas, 1340-2560 m (4,400-8,400 ft).

DESCRIPTION: Showy annual with erect, usually simple stems that are 10-20 cm (4-8 in) tall. The 2-5 pairs of opposite leaves are broadly lance-shaped to ovate, 1-6 cm long, the upper being longer and narrower. Herbage is hairless. Flowers are solitary at the ends of the stems. The calyx is 15-20 mm long with four deep lobes at the top. The deep blue funnel-shaped corolla is 20-40 mm long, four-parted, and lobed nearly half its length. Lobes have small teeth along the sides but are rounded and entire-margined at the tip. Notches between the lobes are not plaited or fringed. Flowering in June and July.

This species can be distinguished from the more common G. detonsa by the unbranched stems and entire-margined tips of the corolla lobes.

COMMENTS: In Montana, this species is known from only two sites, both near the Idaho border.

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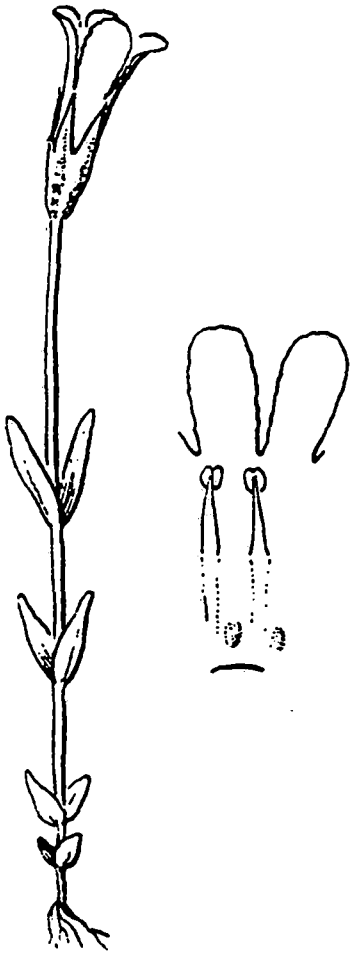
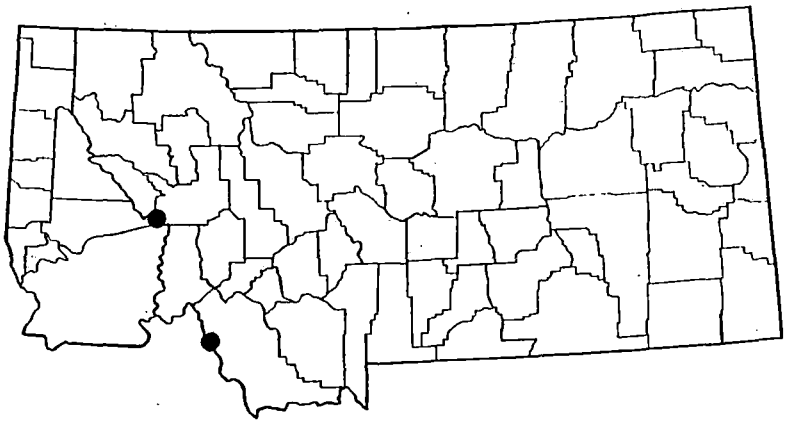
GENTIANOPSIS SIMPLEX





ERIOPHORUM VIRIDICARINATUM (Engelm.) Fern.
Green-keeled Cottongrass

FAMILY: Cyperaceae (Sedge Family)

SYNONYMS: None.

USFS REGION 1 STATUS: MT - WATCH; ND - SENSITIVE.

USFWS STATUS: None.

MONTANA STATUS: Sensitive.

GLOBAL AND STATE RANK: G5/S1

GLOBAL DISTRIBUTION: Boreal North America, south to NY, CO, northern ID, and WA. Sparsely distributed in Montana.

MONTANA COUNTIES: Flathead, Lake, Powell, Teton.

PHYSIOGRAPHIC DISTRIBUTION: Livingston Range, Rocky Mountain Front Range, South Fork Flathead River drainage.

NATIONAL FOREST(S): Flathead; possibly occurring on Deerlodge, Helena, Lewis & Clark, Kootenai, Lolo.

HABITAT: Cold sphagnum bogs in the foothill and montane zones, 1160-1370 m (3,800-4,500 ft).

DESCRIPTION: Sedge-like plant forming colonies of single, erect stems 20-60 cm (8-24 in) tall from extensive creeping rhizomes. Basal and stem leaves, 2-6 mm wide, are flat except for the triangular tip. The 2-8 flowering spikes are borne in an open cluster at the top of the stem, subtended by several narrowly lance-shaped, leaf-like bracts. At least one of the spikes is nodding on an elongate stalk. Each spike consists of a series of overlapping scales enclosing a bisexual flower. Blackish-green scales are triangular in outline with a light-colored midrib that becomes broader at the tip. At maturity, the achenes (seeds) have numerous long, silky bristles at the top giving the spike the appearance of a loose tuft of cotton. Mature fruit in late June through July.

This species can be distinguished from the more common E. polystachion by the midrib of the flower scale that becomes wider rather than narrower at the tip.

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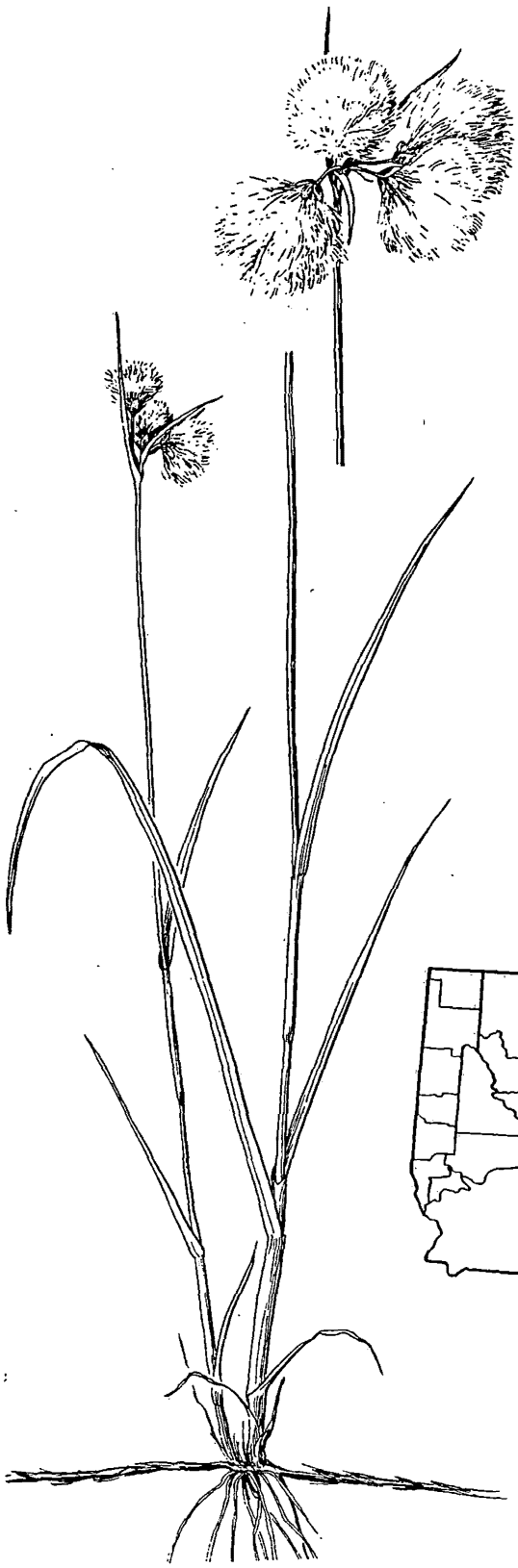
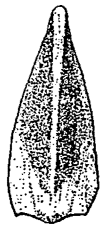
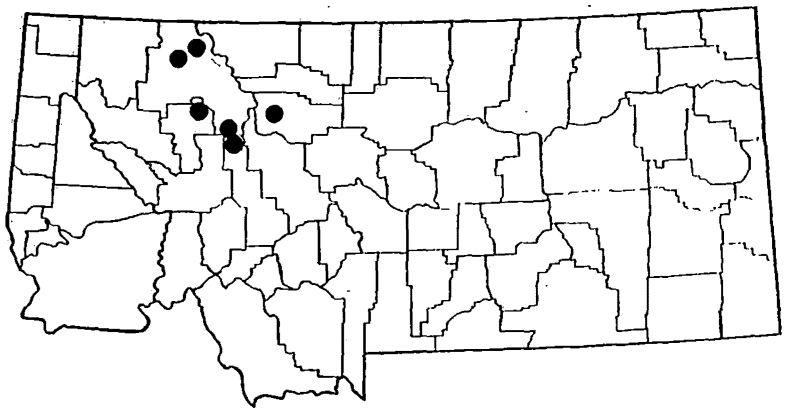
ERIOPHORUM VIRIDICARINATUM







ERIGERON LINEARIS (Hook.) Piper
Desert Yellow Daisy

FAMILY: Asteraceae (Sunflower Family)

SYNONYMS: Diplopappus linearis Hook.; Erigeron peucephyllus Gray; E. luteus A. Nels.; E. yakimensis A. Nels.

USFS REGION 1 STATUS: MT - WATCH.

USFWS STATUS: None.

MONTANA STATUS: Sensitive.

GLOBAL AND STATE RANK: G5/S1

GLOBAL DISTRIBUTION: Southern B.C., south through eastern WA and OR to northern NV and Yosemite National Park; east through central ID to Yellowstone National Park and adjacent MT.

MONTANA COUNTIES: Beaverhead, Ravalli.

PHYSIOGRAPHIC DISTRIBUTION: Bitterroot Valley, Beaverhead River drainage.

NATIONAL FOREST(S): Bitterroot; possibly occurring on Beaverhead.

HABITAT: Dry, often rocky soil from the plains and foothills to mid-elevations in the mountains, often with sagebrush, 1190-1830 m (3,900-6,000 ft).

DESCRIPTION: Perennial daisy with unbranched stems, 5-30 cm (2-12 in) tall, from a stout taproot and branched rootcrown. The mostly basal leaves are linear and 1-9 cm long. Bases of the stems and leaves are enlarged and straw-colored or purplish, and herbage is covered with fine gray hairs. Flower heads are usually solitary at the ends of the stems. Involucral bracts are 4-7 mm long and covered with long, appressed hairs and occasionally also with glands. The 15-45 yellow rays are 4-11 mm long. Yellow disk flowers are 3-5 mm long. There are 10-20 pappus bristles at the top of the achene (seed). Flowering in late May and June.

This is the only Erigeron in our area with yellow rays.

COMMENTS: This widespread species is peripheral in southwestern Montana.

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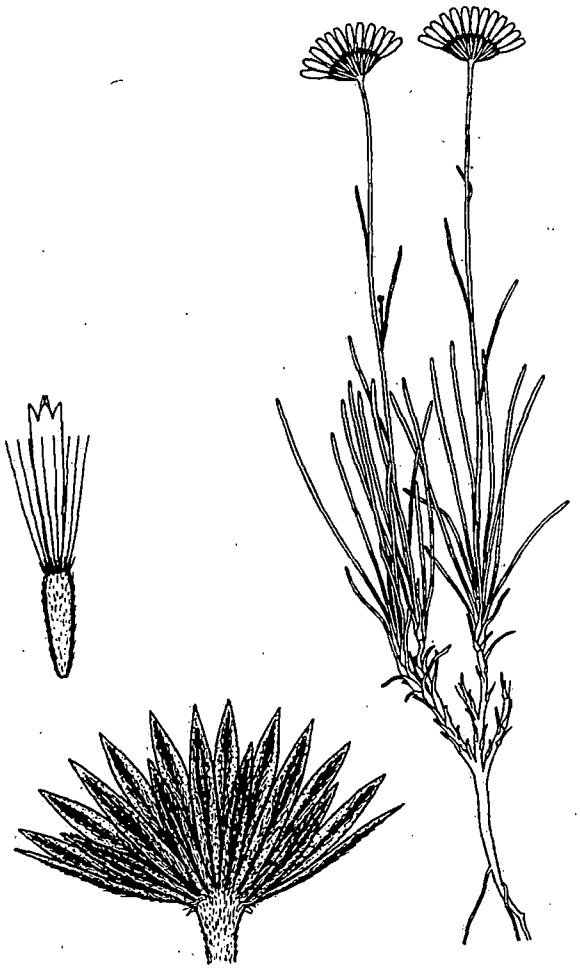
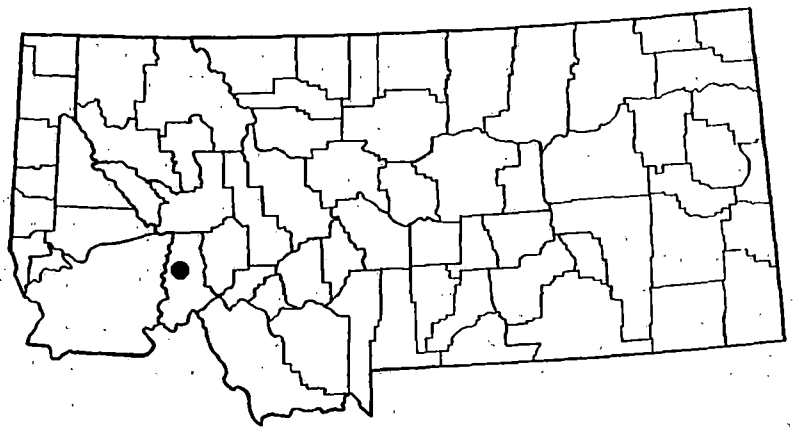
ERIGERON LINEARIS





ERIGERON LACKSCHEWITZII Nesom & Weber
Front Range Fleabane

FAMILY: Asteraceae (Sunflower Family)

SYNONYMS: None; see COMMENTS.

USFS REGION 1 STATUS: MT - WATCH.

USFWS STATUS: None.

MONTANA STATUS: Watch List.

GLOBAL AND STATE RANK: G1Q/S1

GLOBAL DISTRIBUTION: Northwest MT; state endemic.

MONTANA COUNTIES: Flathead, Lewis & Clark, Teton.

PHYSIOGRAPHIC DISTRIBUTION: Flathead Range, Front Range.

NATIONAL FOREST(S): Flathead, Lewis & Clark; possibly occurring on Helena.

HABITAT: Open, gravelly, calcareous soil and talus on ridge tops and in tundra in the alpine zone, 2290-2560 m (7,500-8,400 ft).

DESCRIPTION: Taprooted perennial with a simple or sparingly-branched rootcrown and curved, unbranched stems 3-8 cm (1-3 in) high. The basal leaves are 2-6 cm (1-2.5 in) long and narrowly spoon-shaped with pointed tips. The 5-10 stem leaves are gradually reduced in size upwards. The foliage is sparsely to densely covered with long white hairs. Solitary flower heads are 10-15 mm wide. Involucral bracts are green, 6-8 mm long, and densely covered with long, white hairs and sessile glands. The 30-70 blue rays are 8-11 mm long and notched at the tip. The yellow disk flowers are 3-5 mm long. There are 15-24 pappus bristles at the top of the achenes (seeds). Flowering in July and early August.

Erigeron is a large and difficult genus, and a technical key should be consulted. The taprooted habit, blue ray flowers, and densely long-hairy involucre help distinguish this species.

COMMENTS: Many of the known populations of this Montana endemic are small. Dorn (1984) considers this species to be the same as E. ochroleucus, but no subspecific combinations have been formally proposed.

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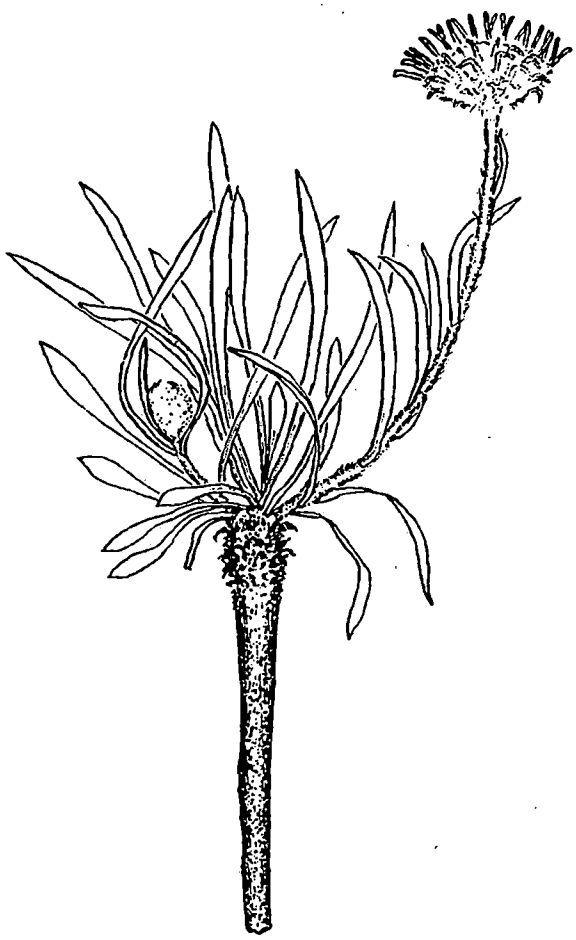
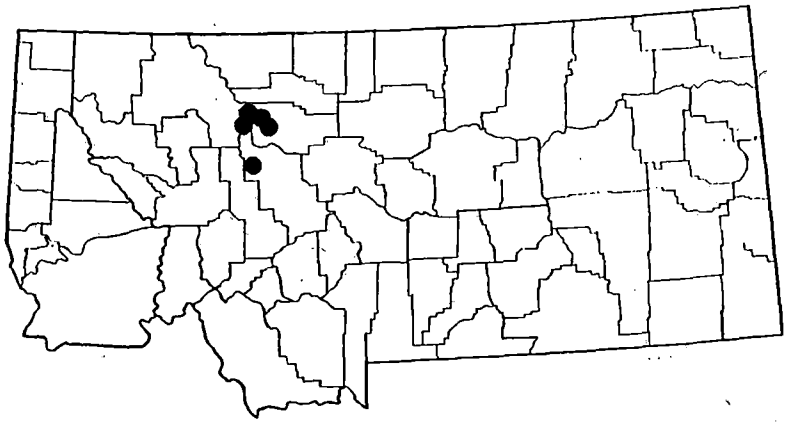
ERIGERON LACKSCHEWITZII





ERIGERON EATONII Gray var. EATONII
Eaton's Daisy

FAMILY: Asteraceae (Sunflower Family)

SYNONYMS: None.

USFS REGION 1 STATUS: MT - WATCH.

USFWS STATUS: None.

MONTANA STATUS: Sensitive.

GLOBAL AND STATE RANK: G4T4/S1

GLOBAL DISTRIBUTION: Southwest MT, WY, southern ID, and southward.

MONTANA COUNTIES: Sweet Grass; reported for Ravalli.

PHYSIOGRAPHIC DISTRIBUTION: Absaroka Mtns.; reported for Bitterroot Mtns.

NATIONAL FOREST(S): Gallatin; possibly occurring on Beaverhead, Bitterroot, Custer.

HABITAT: Open places in the mountains and foothills, up to ca. 2690 m (8,825 ft).

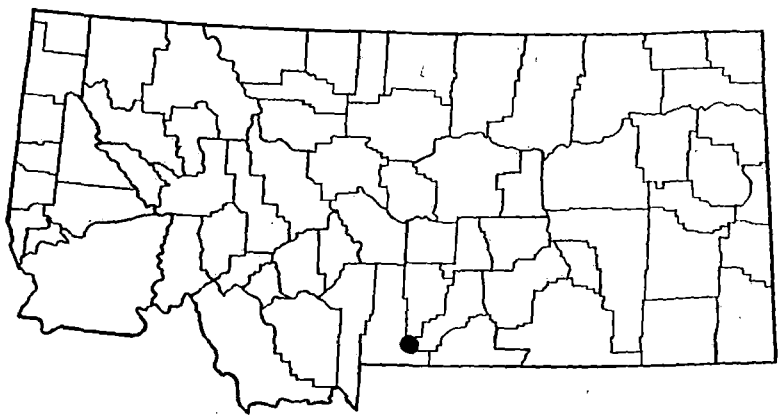
DESCRIPTION: Taprooted perennial with stems 5-30 cm (2-12 in) tall that are purplish and curved at the base. Tufted basal leaves are three-nerved, pointed at the tip, and tapered gradually to the petiole. Stem leaves are smaller and reduced in size upwards. The inflorescence is open with 1-7 flower heads. Glandular involucral bracts are 5-7 mm long and distinctly overlapping. The 20-50 rays are usually white and 5-10 mm long. Yellow disk corollas are 3-5 mm long. There are 15-25 pappus bristles at the top of each achene (seed). Flowering in July and August.

Erigeron is a large and difficult genus, and a technical key should be consulted. The taprooted habit, three-nerved, narrow basal leaves, reduced stem leaves, and white rays help distinguish this species.

COMMENTS: In Montana, this species has been collected only in Sweet Grass County (specimen location mislabeled as Stillwater County).

12/89

ERIGERON EATONII var. EATONII



DELPHINIUM ANDERSONII Gray
Anderson's Larkspur

FAMILY: Ranunculaceae (Buttercup Family)

SYNONYMS: Delphinium tricorne var. andersonii Huth; D. cognatum Greene; D. zylorrhizum Rydb.; D. megacarpum Nels. & Macbr.

USFS REGION 1 STATUS: MT - WATCH.

USFWS STATUS: None.

MONTANA STATUS: Sensitive.

GLOBAL AND STATE RANK: G5/S1

GLOBAL DISTRIBUTION: Central and southeast OR, east to southwest MT, south to UT, NV, and CA east of the Sierra Nevada.

MONTANA COUNTIES: Jefferson.

PHYSIOGRAPHIC DISTRIBUTION: Jefferson River valley.

NATIONAL FOREST(S): Possibly occurring on Beaverhead, Deerlodge, Gallatin.

HABITAT: Sagebrush valleys and hills, into open forests, ca. 1256 m (4,120 ft).

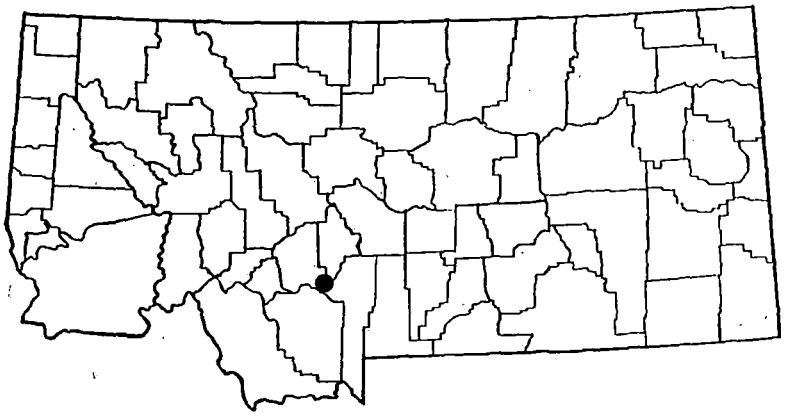
DESCRIPTION: Perennial forb with 1-several erect, sometimes hollow stems, 15-50 cm (6-19 in) tall, from a thick, branching root. Leaves are mostly confined to the lower 1/3 of the stem, the lowest withering by flowering time. Leaf blades are usually somewhat fleshy, 2-5 cm (1-2 in) broad, and three times dissected into linear or oblong segments. Petioles of the lower leaves are 1-5 times as long as the blades. Foliage is hairless. The open inflorescence has one main stem with 3-15 flowers and usually 1-several smaller side branches. The spreading sepals are 11-15 mm long and generally deep blue. Uppermost sepal has a long tubular portion (spur) projecting backwards. Lower petals are also deep blue and have a deep notch, 1/4-1/2 the length of the blade. Erect upper petals are whitish with blue tips. The stalk of each flower is 2-4 times the length of the calyx spur. The three-parted seed capsule is usually hairless. Flowering in June.

Delphinium is a very difficult genus, and a technical key should be consulted. Roots are necessary for positive identification.

COMMENTS: The only Montana record for this species is along the Jefferson River, ca. 6 miles west of Three Forks in Jefferson County.

12/89

DELPHINIUM ANDERSONII



CYPRIPEDIUM FASCICULATUM Kell.
Clustered Lady's-slipper

FAMILY: Orchidaceae (Orchid Family)

SYNONYMS: None.

USFS REGION 1 STATUS: MT - WATCH; N. ID - SENSITIVE.

USFWS STATUS: 3C.

MONTANA STATUS: Threatened.

GLOBAL AND STATE RANK: G3/S1

GLOBAL DISTRIBUTION: WA south to CA, east to CO, WY, ID, and northwest MT. Peripheral in Montana.

MONTANA COUNTIES: Lake.

PHYSIOGRAPHIC DISTRIBUTION: Mission Range.

NATIONAL FOREST(S): Possibly occurring on Flathead, Kootenai, Lolo.

HABITAT: Dry to moist forests in the montane zone, 1070-1250 m (3,500-4,100 ft).

DESCRIPTION: This distinctive orchid has densely hairy, solitary stems, 5-20 cm (2-8 in) tall, arising from a rhizome. There is a single leaf wrapped around the base of the stem and a pair of sessile, opposite leaves near the top of the stem. These leaves are broadly elliptic to oval, 4-8 cm (2-4 in) broad. The 2-4 flowers are tightly clustered at the top of the stem, and each is subtended by a green, lance-shaped bract. The three lance-shaped sepals are 12-25 mm long and greenish brown to purplish with purple lines or spots. The lower two are united nearly to the tip. Two upper petals are similar to the sepals in shape and color. The lower petal is pouch-shaped, shorter than the sepals, and greenish yellow with brownish-purple margins and often with a purple tinge. The ovary and mature capsule are densely hairy. Flowering late June through early August.

Species in the genus Listera resemble this orchid but are smaller, have prominent hairs, and have flowers arranged in an elongate cluster.

COMMENTS: Clustered lady's-slipper has been collected in Montana only on the west side of the Mission Mtns. Only one site has been recently relocated.

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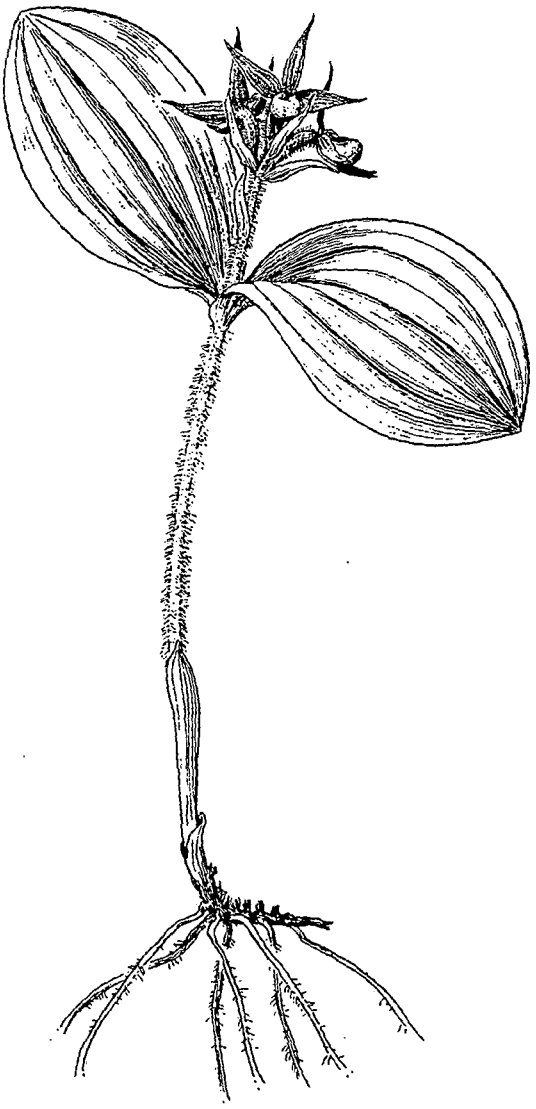
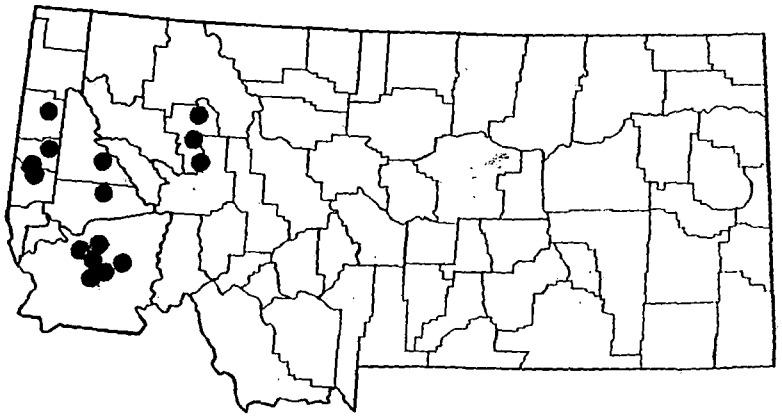
CYPRIPEDIUM FASCICULATUM





LIGUSTICUM FILICINUM Wats.
Fern-leaf Lovage

FAMILY: Apiaceae (Parsley Family)

SYNONYMS: None.

USFS REGION 1 STATUS: MT - WATCH.

USFWS STATUS: None.

MONTANA STATUS: Limited Distribution.

GLOBAL AND STATE RANK: G?/S1

GLOBAL DISTRIBUTION: Southwest MT, southeast ID, northwest WY, and northern UT. Regional endemic.

MONTANA COUNTIES: Beaverhead, Madison.

PHYSIOGRAPHIC DISTRIBUTION: Beaverhead Range, Centennial Mtns., Gravelly Range.

NATIONAL FOREST(S): Beaverhead; possibly occurring on Gallatin.

HABITAT: Moist meadows and forest openings in the montane and subalpine zones, 1650-2440 m (5,400-8,000 ft).

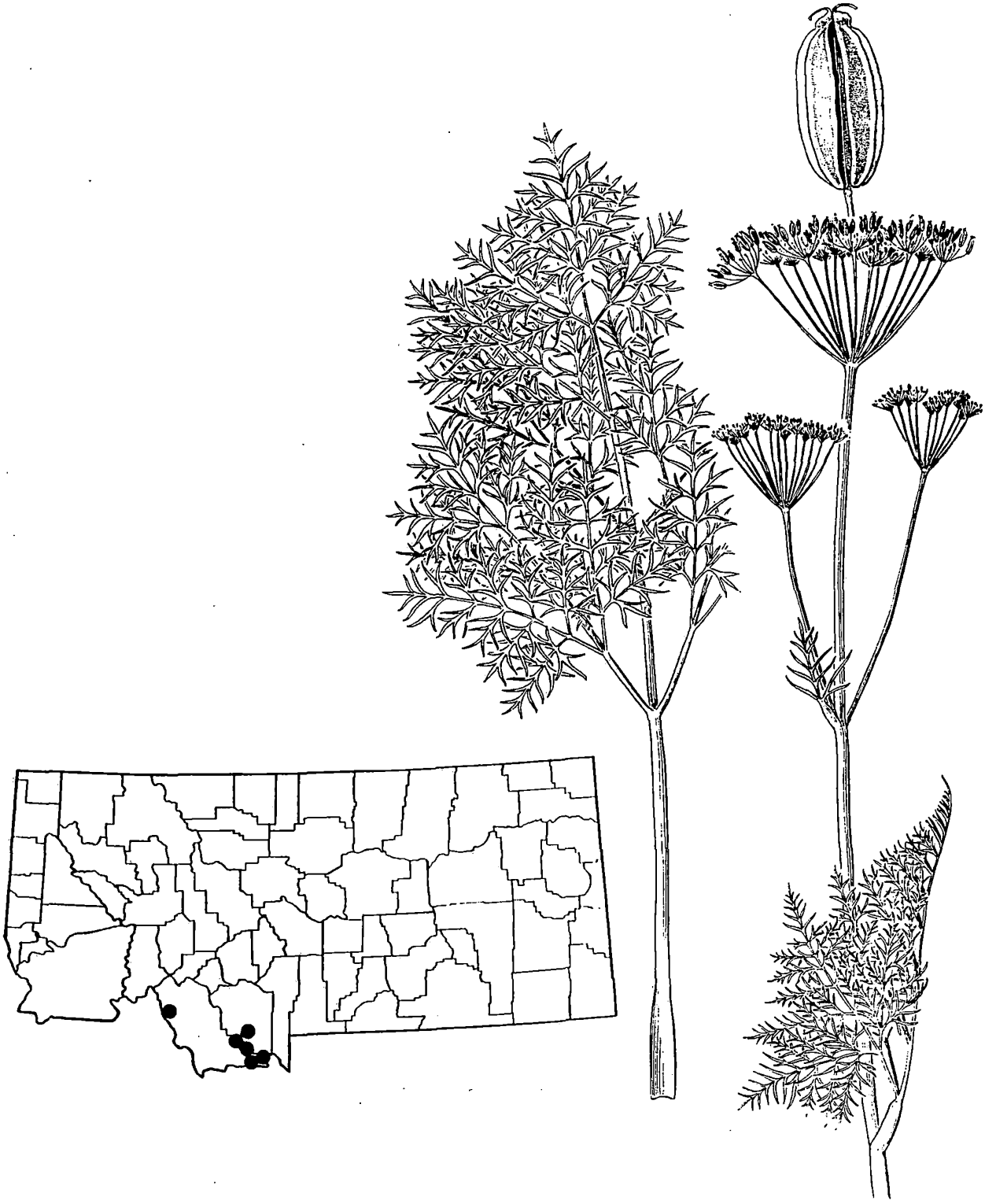
DESCRIPTION: Perennial with branched stems 50-100 cm (20-39 in) tall. Leaves are four times divided into numerous linear segments, 1-3 mm wide. The large basal leaves have long petioles and are 10-25 cm (4-10 in) wide. Stem leaves are gradually reduced upwards. Herbage is hairless or slightly roughened. Numerous flowers are borne in 1-several flat-topped, umbrella-like inflorescences (umbels), 2-6 cm long at maturity. Each flower has five small, white petals arising from the top of the ovary. Ribbed fruit is oblong and 5-7 mm long. Flowering in late June and July.

This species could be confused with Ligusticum tenuifolium or Lomatium dissectum, both of which have highly dissected leaves; however, the former has leaves that are generally less than 10 cm wide, and the latter has yellow flowers. Mature fruit is needed for positive identification.

COMMENTS: This species is locally common in the Centennial Valley region.

12/89

LIGUSTICUM FILICINUM



LIGUSTICUM PORTERI Coult. & Rose
Porter's Lovage

FAMILY: Apiaceae (Parsley Family)

SYNONYMS: None.

USFS REGION 1 STATUS: MT - WATCH.

USFWS STATUS: None.

MONTANA STATUS: Sensitive.

GLOBAL AND STATE RANK: G4G5/S1

GLOBAL DISTRIBUTION: South-central MT, WY, UT, and eastern NV, south to AZ and northern Mexico.

MONTANA COUNTIES: Carbon.

PHYSIOGRAPHIC DISTRIBUTION: Unknown.

NATIONAL FOREST(S): Possibly occurring on Custer, Gallatin.

HABITAT: Woods, meadows, and slopes.

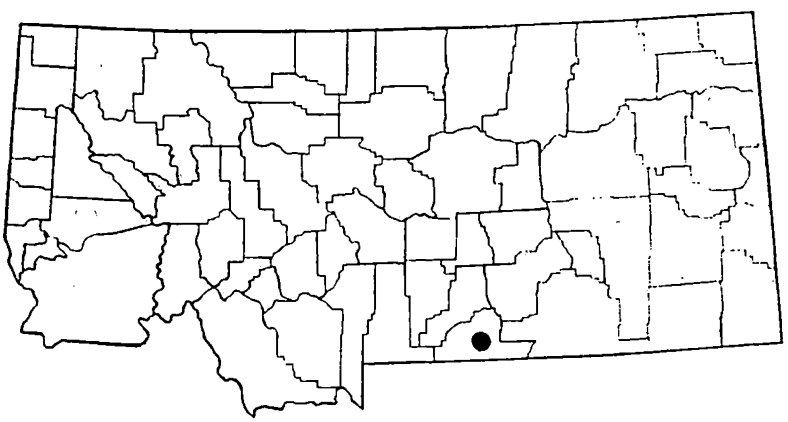
DESCRIPTION: Perennial with branched stems 50-100 cm (20-39 in) tall from a taproot. Leaves are three or four times divided into elliptic or lance-shaped segments, 5-40 mm wide. Basal leaves are 15-30 cm (6-12 in) long and are gradually reduced in size upwards. Herbage is hairless or slightly roughened. Flowers are borne in 1-several flat-topped, umbrella-like inflorescences (umbels). Each flower has five small, white petals, 1-2 mm long arising from the top of the ovary. The ribbed fruit is oblong and 5-8 mm long.

This species can be distinguished from L. filicinum and L. tenuifolium by its broader leaflets. Mature fruit is needed for positive identification.

12/89

LIGUSTICUM PORTERI

NO ILLUSTRATION AVAILABLE



MENTZELIA MONTANA (Davids.) Davids.
Mountain Blazing-star

FAMILY: Loasaceae (Blazing Star Family)

SYNONYMS: Unknown.

USFS REGION 1 STATUS: MT - WATCH.

USFWS STATUS: None.

MONTANA STATUS: Undetermined.

GLOBAL AND STATE RANK: G4/SU

GLOBAL DISTRIBUTION: Southern OR to southern MT, south to CA, TX and Mexico.

MONTANA COUNTIES: Park.

PHYSIOGRAPHIC DISTRIBUTION: Unknown.

NATIONAL FOREST(S): Possibly occurring on Custer, Gallatin.

HABITAT: Plains, hills, and slopes

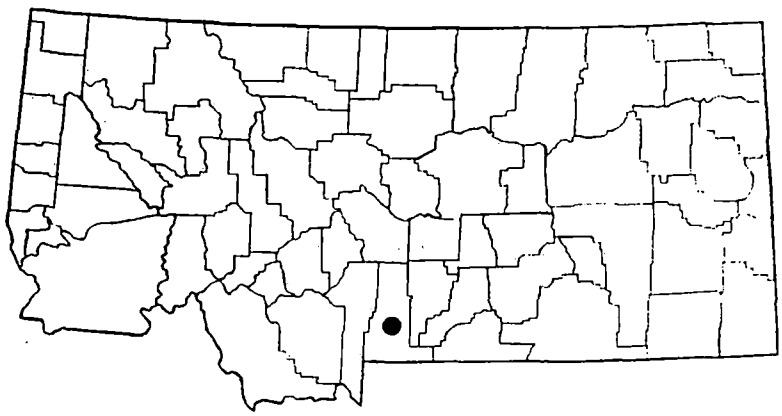
DESCRIPTION: Annual with erect, sparingly branched stems up to 40 cm (16 in) tall. The basal leaves are broadly lance-shaped, up to 10 cm (4 in) long, and usually have lobed margins. Those of the stem are gradually reduced in size upwards. Leaves are covered with hooked hairs that cling tenaciously to cloth. Each inflorescence consists of 1-3 flowers subtended by linear or lance-shaped bracts having a whitish spot at the base. The flower parts are attached to the top of the ovary. Calyx segments are 1-3 mm long, and the five yellow petals are 2-4 mm long.

This species can be distinguished from other small-flowered Mentzelia in our area by the combination of lobed leaves and narrow floral bracts with a whitish, basal spot.

12/89

MENTZELIA MONTANA

NO ILLUSTRATION AVAILABLE



MENTZELIA NUDA (Pursh) T. & G.
Bractless Mentzelia

FAMILY: Loasaceae (Blazing Star Family)

SYNONYMS: Nuttallia nuda (Pursh) Greene; N. stricta (Osterh.) Greene.

USFS REGION 1 STATUS: MT - WATCH.

USFWS STATUS: None.

MONTANA STATUS: Undetermined.

GLOBAL AND STATE RANK: G5/SU

GLOBAL DISTRIBUTION: Eastern MT and WY, western SD, western and central NE, KS and OK, eastern CO, and TX panhandle.

MONTANA COUNTIES: Big Horn, Custer, Dawson, Rosebud, Treasure.

PHYSIOGRAPHIC DISTRIBUTION: Great Plains.

NATIONAL FOREST(S): Possibly occurring on Custer.

HABITAT: Sandy and gravelly hillsides, pastures, roadsides, and gypsum banks, 640-760 m (2,100-2,500 ft).

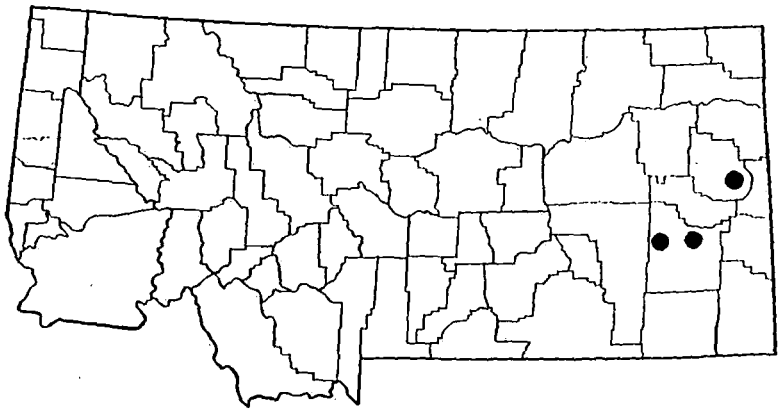
DESCRIPTION: Biennial or perennial forb with erect stems up to 100 cm (40 in) tall that are often branched above. Broadly lance-shaped leaves have toothed margins and are 4-10 cm (2-4 in) long. Lower leaves have short petioles, while the upper are stalkless. Foliage is covered with hooked hairs that adhere to cloth. The flowers, each subtended by a small bract, are borne at the ends of branches in a small, open inflorescence. Each flower has ca. 10 white or cream-colored petals, 2-5 cm (1-2 in) long, and numerous stamens about as long as the petals. The fruit is a many-seeded, cylindrical capsule 2-3 cm (1-1.5 in) long. Flowering in late June and July.

This species is similar to the more common M. decapetala, but the latter has petals greater than 5 cm (2 in) long.

COMMENTS: This species is more common in the southern Great Plains.

12/89

MENTZELIA NUDA



OROBANCHE CORYMBOSA (Rydb.) Ferris
Flat-topped Broomrape

FAMILY: Orobanchaceae (Broomrape Family)

SYNONYMS: Orobanche californica Cham. & Schlecht. var. corymbosa (Rydb.) Munz.

USFS REGION 1 STATUS: MT - WATCH.

USFWS STATUS: None.

MONTANA STATUS: Sensitive.

GLOBAL AND STATE RANK: G4/S1

GLOBAL DISTRIBUTION: Southern B.C., south to CA, NV, UT, and southwestern MT.

MONTANA COUNTIES: Beaverhead; questionable record from Ravalli.

PHYSIOGRAPHIC DISTRIBUTION: Big Hole River drainage.

NATIONAL FOREST(S): Possibly occurring on Beaverhead, Bitterroot, Deerlodge.

HABITAT: Plains and hills, 1920 m (6,300 ft).

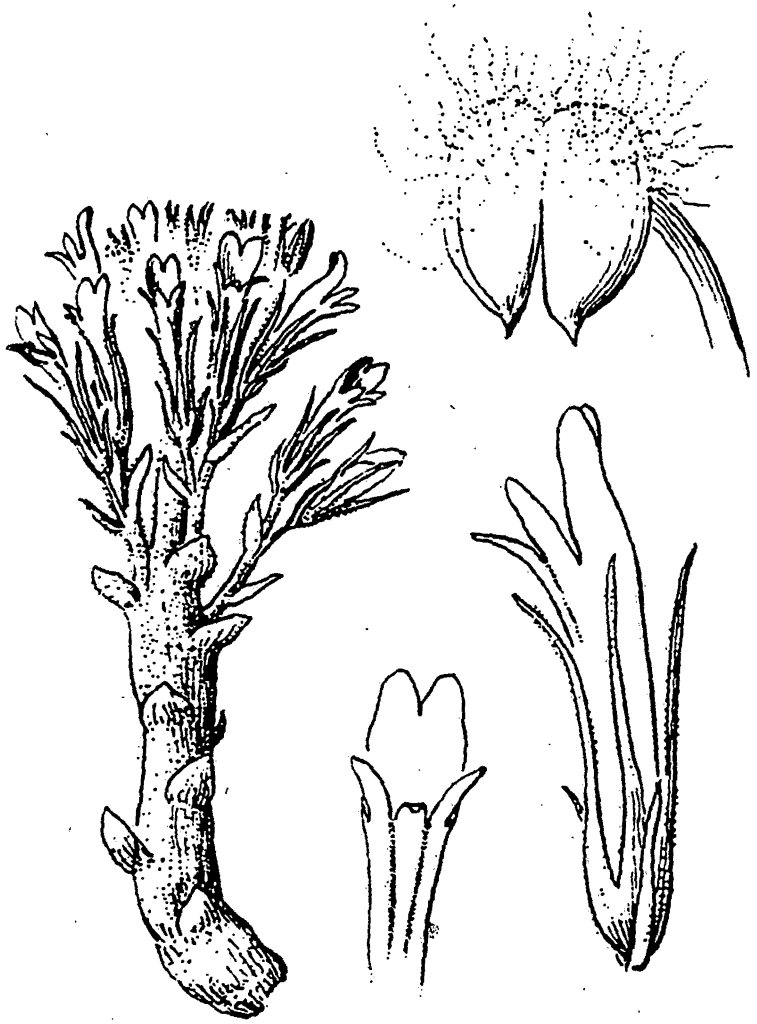
DESCRIPTION: Leafless, parasitic plant, 5-12 cm (2-5 in) tall, from an enlarged underground base. The thick, fleshy, yellowish stem is covered with glandular hairs and has small triangular bracts instead of leaves. Flowers are borne on erect stalks up to 3 cm (1.5 in) long in a short, dense, terminal inflorescence. Each stalk is subtended by a narrow bract, and there are two small bracts at the base of the flower. The calyx is 10-20 mm long and deeply divided into five long, narrow lobes. The purplish, tubular corolla is 22-28 mm long and has five unequal lobes at the mouth. Anthers are long-wooly. Flowering in August.

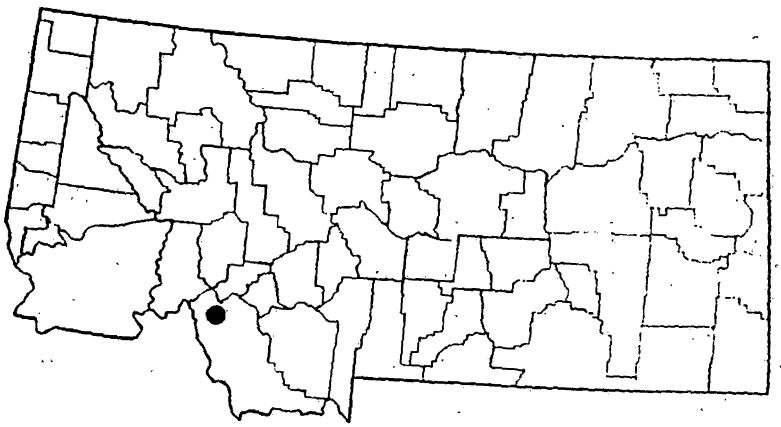
This species can be distinguished from the more common O. fasciculata by having shorter flower stalks and two bractlets at the base of each flower.

COMMENTS: This species is parasitic, most often on the roots of Artemisia tridentata (big sagebrush).

12/89

OROBANCHE CORYMBOSA





OROGENIA LINEARIFOLIA Wats.
Great Basin Orogenia

FAMILY: Apiaceae (Parsley Family)

SYNONYMS: None.

USFS REGION 1 STATUS: MT - WATCH.

USFWS STATUS: None.

MONTANA STATUS: Sensitive.

GLOBAL AND STATE RANK: G4/S1

GLOBAL DISTRIBUTION: Southern WA (east of the Cascades) and adjacent southern ID and eastern OR, south to UT and western CO, east to southwestern MT.

MONTANA COUNTIES: Missoula, Ravalli.

PHYSIOGRAPHIC DISTRIBUTION: Bitterroot Mtns.

NATIONAL FOREST(S): Bitterroot, Lolo; possibly occurring on Beaverhead.

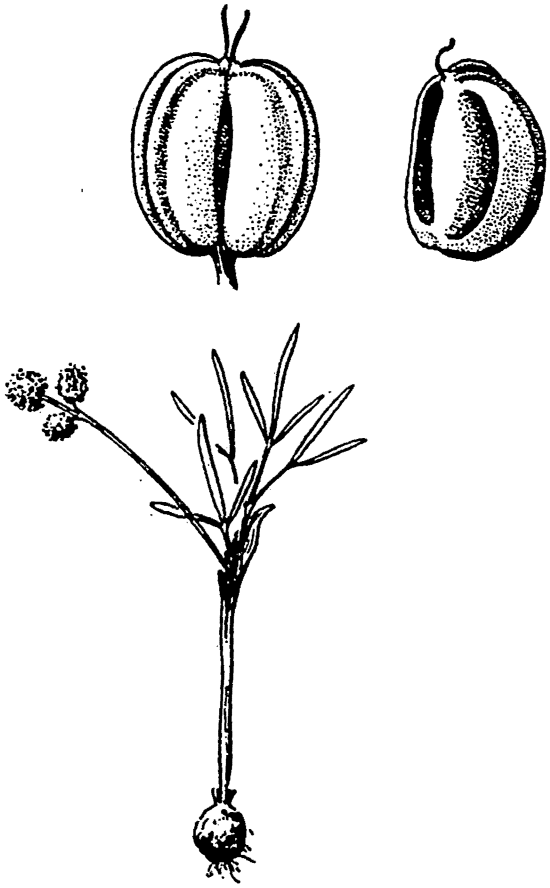
HABITAT: Open slopes, ridges, and meadows, from lower foothills to mid-elevations in the mountains, 1250-1585 m (4,100-5,200 ft).

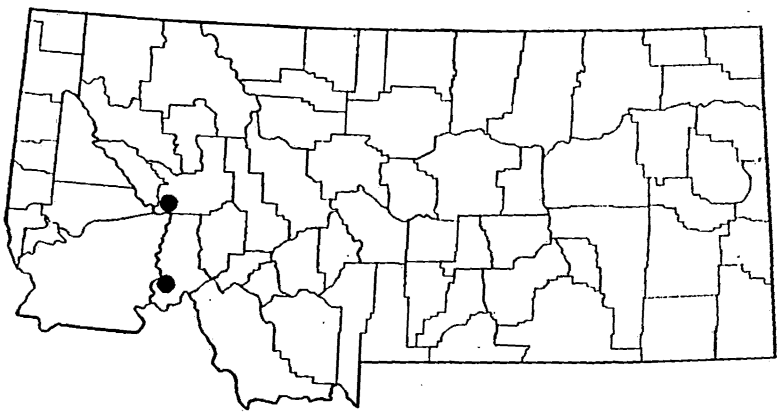
DESCRIPTION: Delicate perennial with stems 2-5 cm (1-2 in) tall arising from a deep, globe-shaped root up to 15 mm thick. The 2-3 leaves, occurring just above ground level, are 1-3 times divided into linear segments 1-5 cm (0.5-2 in) long and 1-4 mm wide. Small flowers are borne in compact clusters at the ends of 2-several inflorescence branches, 1-2 cm long, that arise from the top of the stem. This compact inflorescence becomes more open in fruit. Five small, white petals arise from the top of the ovary. The oblong-elliptic fruits are ribbed and 3-4 mm long. Flowering in May.

The small size, white flowers, and globe-shaped root distinguish this species from other members of this family in our area.

12/89

OROGENIA LINEARIFOLIA





PEDICULARIS CONTORTA Benth. var. CTENOPHORA (Rydb.) Nels. & Macbr.
Coil-beaked Lousewort

FAMILY: Scrophulariaceae (Figwort Family)

SYNONYMS: Pedicularis ctenophora Rydb.; P. lunata Rydb.

USFS REGION 1 STATUS: MT - WATCH.

USFWS STATUS: None.

MONTANA STATUS: Undetermined.

GLOBAL AND STATE RANK: G5T?/SU

GLOBAL DISTRIBUTION: Big Horn Mtns. of WY, occasional west to Beaverhead Co., MT.

MONTANA COUNTIES: Beaverhead.

PHYSIOGRAPHIC DISTRIBUTION: Beaverhead Mtns.

NATIONAL FOREST(S): Beaverhead; possibly occurring on Bitterroot, Deerlodge.

HABITAT: Wooded or open slopes and drier meadows at mid- to high elevations in the mountains, 2440-2620 m (8,000-8,600 ft).

DESCRIPTION: Perennial with clustered stems 15-60 cm (6-25 in) tall from a stout, branched rootcrown. Basal leaves are 5-18 cm (2-7 in) long and 5-20 mm wide. The blade is longer than the petiole and deeply dissected into many toothed lobes. Stem leaves are reduced in size upwards, and the herbage is hairless. Pink or purplish flowers are subtended by small lobed bracts and borne in an open, elongate inflorescence. The green calyx is long-hairy and united below with five dark lines on the tube and five unequal lobes at the mouth. The unusual flower is ca. 1 cm long, with a broad, lower lip and an upper lip (galea) shaped like a downcurved snout. The dark brown seed capsule is flattened and ca. 8 mm long. Flowering in July.

The long downcurved galea separates P. contorta from other Pedicularis species. This variety is distinguished by the combination of pink or purple flowers and long-hairy calyx.

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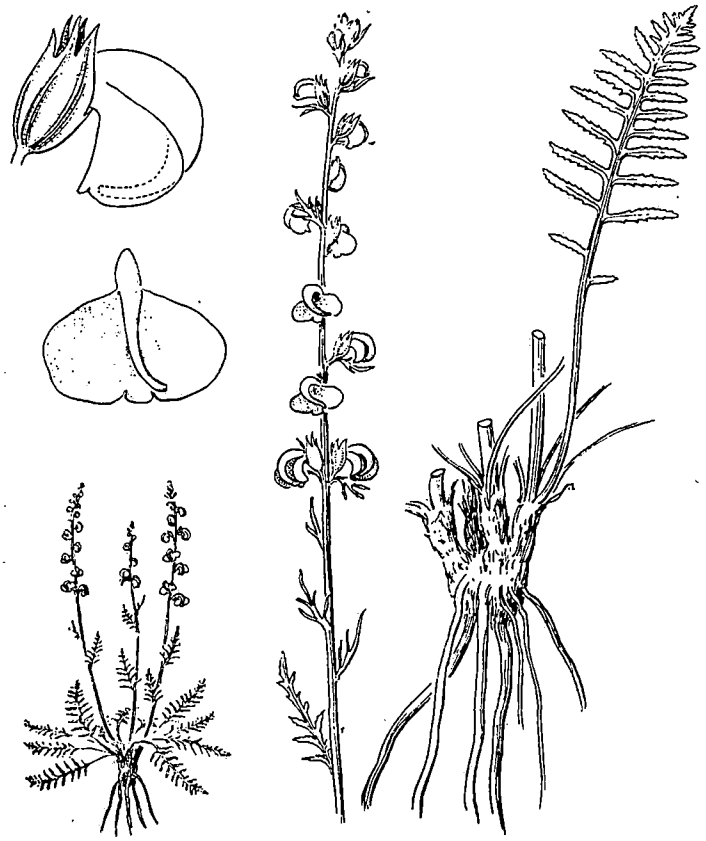
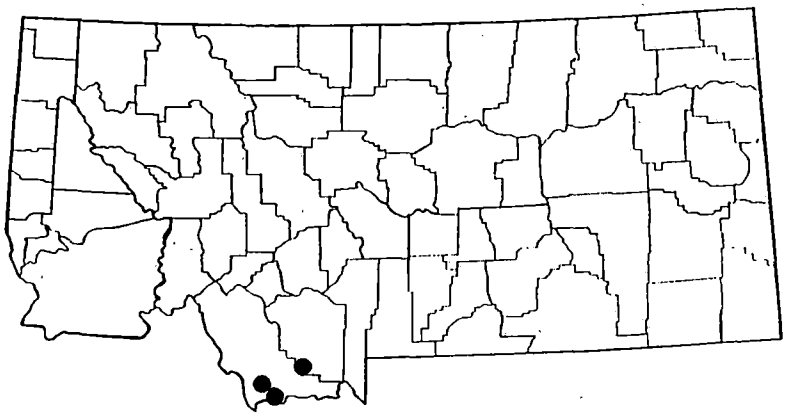
PEDICULARIS CONTORTA var. CTENOPHORA





PHLOX KELSEYI Britt. var. MISSOULENSIS (Wherry) Cronq.
Missoula Phlox

FAMILY: Polemoniaceae (Phlox Family)

SYNONYMS: P. missoulensis Wherry.

USFS REGION 1 STATUS: MT - WATCH.

USFWS STATUS: 3C.

MONTANA STATUS: Watch list.

GLOBAL AND STATE RANK: G4T2Q/S2

GLOBAL DISTRIBUTION: Western and central MT; state endemic.

MONTANA COUNTIES: Granite, Lewis & Clark, Meagher, Missoula, Powell.

PHYSIOGRAPHIC DISTRIBUTION: Little Belt Mtns., south Front Range Mtns., Continental Divide (McDonald Pass), Waterworks Hill (Missoula).

NATIONAL FOREST(S): Helena, Lewis & Clark; possibly occurring on Bitterroot, Deerlodge, Lolo.

HABITAT: Open, windswept slopes, 1095-2300 m (3,600-7,540 ft).

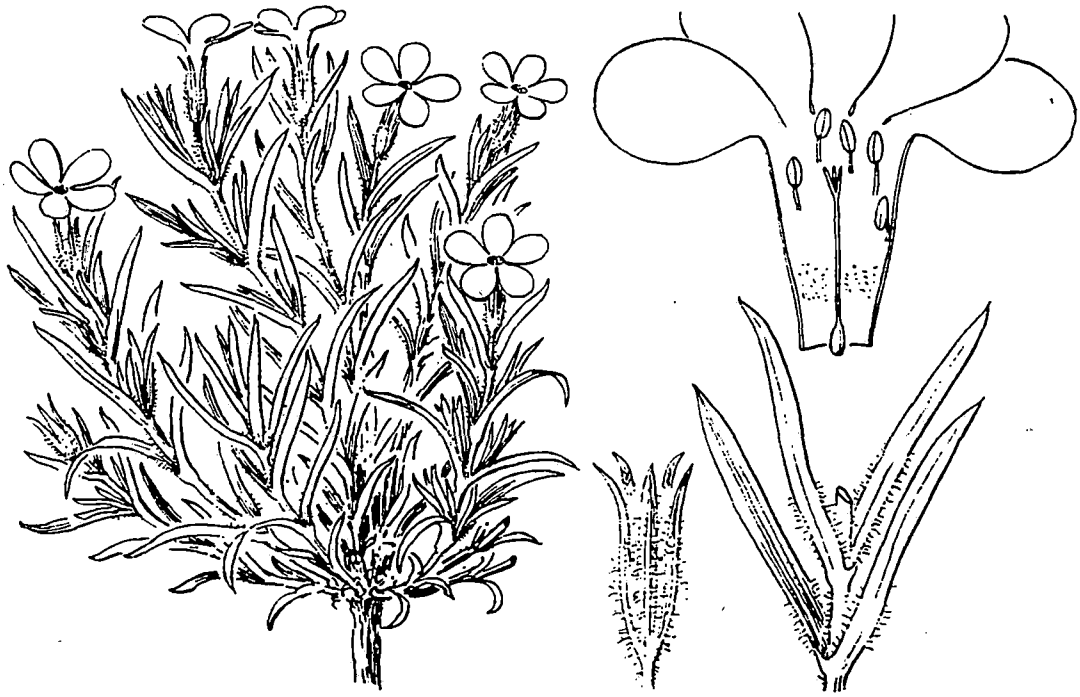
DESCRIPTION: Mat-forming perennial with numerous prostrate, branching stems up to 10 cm (4 in) long from a branched rootcrown. The sharply-pointed, linear leaves, 10-25 mm long and 1-3 mm wide, are opposite each other on the stem and have thickened margins and long, spreading hairs at the base. Herbage is otherwise hairless to short-hairy or glandular. The typical phlox flowers are solitary at the ends of the stems. The five-lobed calyx is densely hairy and sometimes glandular. Flowers are white or various shades of pink and blue and has a tube 10-13 mm long and five broad lobes 6-9 mm long at the mouth. Style is 4-8 mm long. Flowering in May and June.

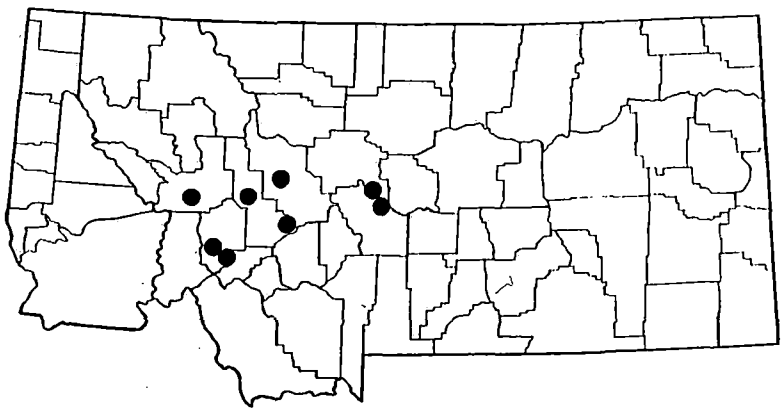
Phlox is a difficult genus, and a technical key should be consulted for positive identification. Varieties missoulensis and kelseyi are very similar; however, the former occurs in dry, exposed habitats, while the latter is found in moist meadows.

COMMENTS: This variety is endemic to Montana, and occurs sporadically in the western portion of the state. It is sometimes treated as a full species.

12/89

PHLOX KELSEYI var. MISSOULENSIS





POLYGONUM DOUGLASII Greene ssp. AUSTINIAE (Greene) Hickman
Austin's Knotweed

FAMILY: Polygonaceae (Buckwheat Family)

SYNONYMS: P. austiniae Greene.

USFS REGION 1 STATUS: MT - WATCH.

USFWS STATUS: None.

MONTANA STATUS: Sensitive.

GLOBAL AND STATE RANK: G4G5TU/S1

GLOBAL DISTRIBUTION: B.C. south to CA, east to Alberta, MT and WY. The species occurs throughout most of the U.S. and southern Canada. Sparsely distributed in Montana.

MONTANA COUNTIES: Broadwater, Lewis & Clark, Pondera.

PHYSIOGRAPHIC DISTRIBUTION: Front Range, Big Belt Mtns.

NATIONAL FOREST(S): Helena, Lewis & Clark; possibly occurring on Deerlodge.

HABITAT: Open, gravelly, often shale-derived soils of eroding slopes and banks in montane zone, 1770-2010 m (5,800-6,600 ft).

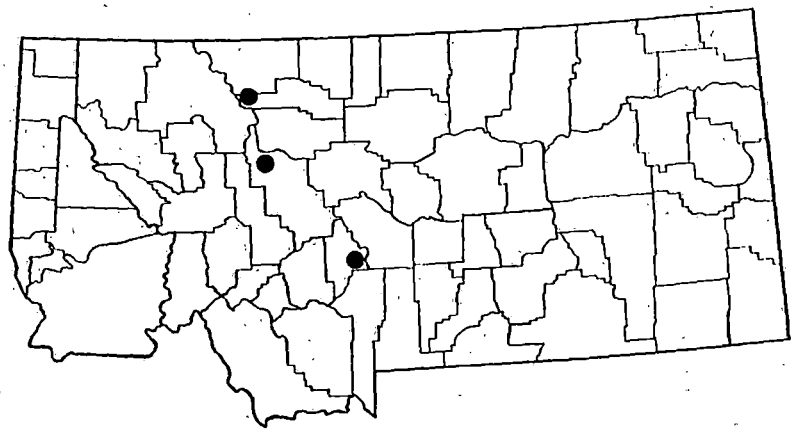
DESCRIPTION: Small annual that is branched from the base with erect stems generally 5-10 cm (2-4 in) tall. Leaves are broadly to narrowly elliptic. Lower leaves are 5-15 mm long, becoming gradually smaller upwards on the stem. There is a light-colored, membranous sheath (stipule) encircling the stem at the point where each leaf is attached. Foliage is more or less covered with tiny white scales. The small, nodding flowers are borne in open, elongate inflorescences; each group of 1-4 flowers is subtended by a small, leaf-like bract. Each flower has five greenish, whitish, or pink-tinged "petals" that are ca. 2 mm long and united at the base. The triangular achene (seed) is 2-3 mm long, black, and shining. Flowering in July, mature fruit in July and August.

There are many species of small annual Polygonum and a technical key should be consulted for positive identification. Mature achenes are essential.

COMMENTS: This small plant is easily overlooked and may be more common than records indicate.

12/89

POLYGONUM DOUGLASII var. AUSTINAE



POLYSTICHUM KRUCKEBERGII Wagner
Kruckeberg's Sword-fern

FAMILY: Polypodiaceae (Fern Family)

SYNONYMS: None.

USFS REGION 1 STATUS: MT - WATCH; N. ID - WATCH.

USFWS STATUS: 3C.

MONTANA STATUS: Sensitive.

GLOBAL AND STATE RANK: G5/S1

GLOBAL DISTRIBUTION: Irregular from southern B.C. and northwestern WA (Olympic Mtns.) to northern CA, east to central ID, western MT, and northern UT.

MONTANA COUNTIES: Deer Lodge, Lake; possibly Missoula.

PHYSIOGRAPHIC DISTRIBUTION: Anaconda-Pintlar Range, Mission Range.

NATIONAL FOREST(S): Deerlodge; possibly occurring on Beaverhead, Flathead, Lewis & Clark, Lolo.

HABITAT: Cliff crevices and talus slopes at mid- and upper elevations in the mountains, 2195-2830 m (7,200-9,275 ft).

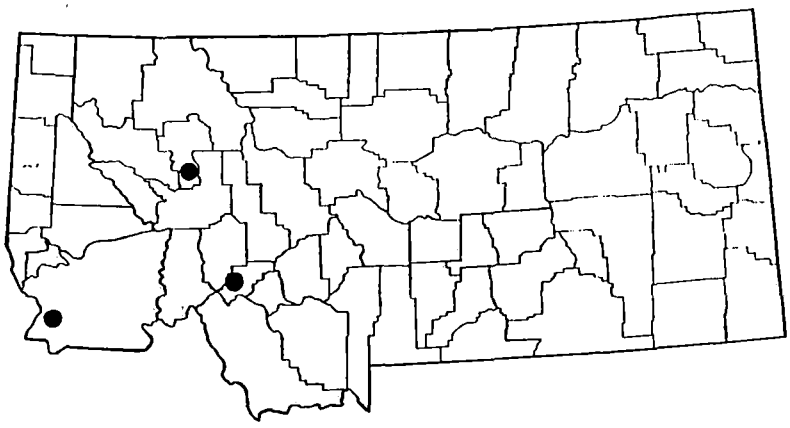
DESCRIPTION: Fern with evergreen fronds, 9-35 cm (4-14 in) long, clustered on a short, ascending rhizome. Each frond consists of a scale-covered petiole (stipe) 2-11 cm (1-4 in) long, and a narrowly lance-shaped blade (laminae) 7-23 cm (3-9 in) long, that is deeply lobed into 20-40 leaflets (pinnae). Each pinna has a toothed and spiny margin, and the lower ones are lobed at the base. Spores are borne in small clusters (sori), partially covered by a membranous disk (indusium), on the undersides of the upper pinnae. Mature fronds in August.

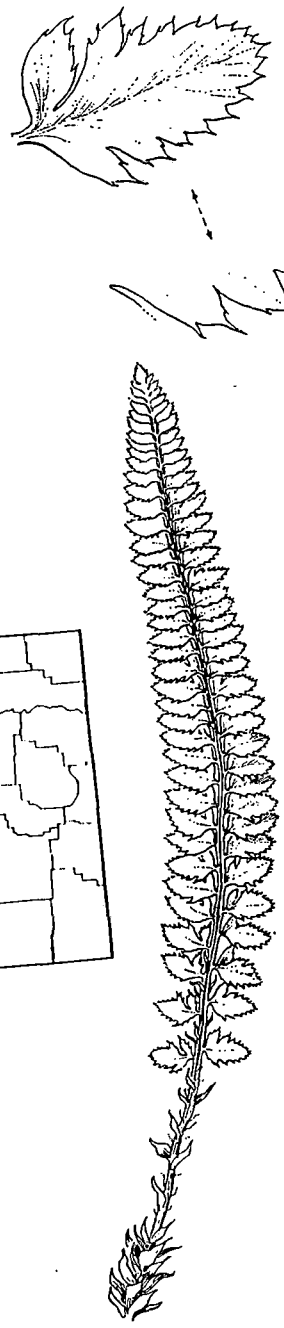
Kruckeberg's sword-fern is distinguished from the common P. lonchites by the lobed basal pinnae and from P. scopulinum by the spiny pinnae margins.

COMMENTS: This species is widely scattered in the northwestern United States and southwestern Canada.

12/89

POLYSTICHUM KRUCKEBERGII





RORIPPA CALYCINA (Engelm.) Rydb.
Persistent Yellowcress

FAMILY: Brassicaceae (Mustard Family)

SYNONYMS: Nasturtium calycinum Engelm. in Warren; Nasturtium sinuatum var. calycinum Wats. in Gray; Radicula calycina Greene.

USFS REGION 1 STATUS: MT - WATCH.

USFWS STATUS: C2.

MONTANA STATUS: Sensitive.

GLOBAL AND STATE RANK: G3/S1

GLOBAL DISTRIBUTION: Eastern MT, and WY, ND.

MONTANA COUNTIES: McCone; historically known from Cascade, Custer, and possibly Yellowstone.

PHYSIOGRAPHIC DISTRIBUTION: Great Plains.

NATIONAL FOREST(S): Possibly occurring on Custer, Lewis & Clark.

HABITAT: Riverbanks and shorelines, 610-760 m (2,000-2,500 ft).

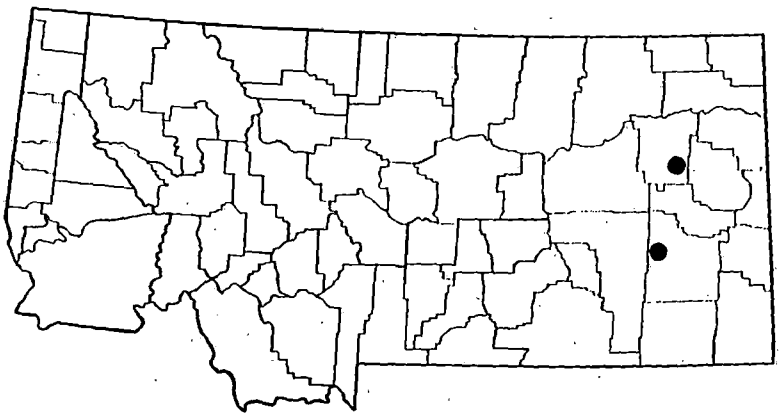
DESCRIPTION: Rhizomatous perennial with trailing or weakly erect, branched stems 10-40 cm (4-16 in) long. The leaves are coarsely toothed or shallowly lobed and 3-7 cm (1-3 in) long. The lower ones have petioles; the upper lack petioles and tend to clasp the stem. Herbage is finely hairy or roughened. Flowers are borne in a branched inflorescence that becomes more open as the fruits mature. Each flower has four sepals and four yellow petals ca. 4 mm long. The soft-hairy fruits are ovate to oblong, 3-7 mm long, and held erect or spreading-erect at maturity. Flowering in May through September.

This species can be distinguished from other members of the genus Rorippa by the rhizomatous habit and the soft-hairy fruits.

COMMENTS: In Montana, this species has been collected in only a few scattered locations east of the mountains.

12/89

RORIPPA CALYCINA



SCIRPUS CYPERINUS (L.) Kunth
Wool Grass

FAMILY: Cyperaceae (Sedge Family)

SYNONYMS: Eriophorum cyperinum L.; Scirpus atrocinctus Fern.

USFS REGION 1 STATUS: MT - WATCH; N. ID - SENSITIVE.

USFWS STATUS: None.

MONTANA STATUS: Sensitive/Undetermined.

GLOBAL AND STATE RANK: G5/S1

GLOBAL DISTRIBUTION: Newfoundland south to FL, west to MN, MO, and TX; occasional across southern Canada to B.C.; northwest MT, northern ID.

MONTANA COUNTIES: Lincoln, Sanders.

PHYSIOGRAPHIC DISTRIBUTION: Northwest MT.

NATIONAL FOREST(S): Kootenai; possibly occurring on Kaniksu, Lolo.

HABITAT: Wet low ground and lakeshores, 610-760 m (2,000-2,500 ft).

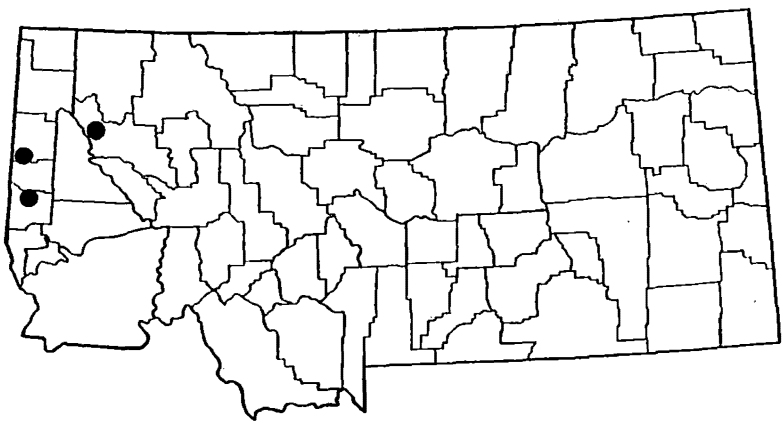
DESCRIPTION: Tufted perennial without rhizomes. Leafy stems are commonly 80-150 cm (3-6 ft) tall with long, flat, grass-like leaves 2-6 mm wide. The inflorescence consists of numerous small spikes and is subtended by several long, narrow, leaf-like bracts that are blackened at the base. Each spike consists of a series of pale or blackish-green, lance-shaped scales, 1-2 mm long. Behind each scale, the flowers contain 3 stamens, an ovary, and 6 slender, tan-colored bristles. At maturity, the ovary becomes a three-sided achene (seed) subtended by the elongated bristles, giving the inflorescence a wooly appearance. Mature fruit in July and August.

The elongate flower bristles of the numerous spikes, and the open inflorescence subtended by several leaf-like bracts, separate this species from other Scirpus in our area.

COMMENTS: This species is locally common, especially along the shoreline of reservoirs along the Clark Fork River in northwestern Montana.

12/89

SCIRPUS CYPERINUS



SCIRPUS SUBTERMINALIS Torr.
Water Bulrush

FAMILY: Cyperaceae (Sedge Family)

SYNONYMS: None.

USFS REGION 1 STATUS: MT - WATCH.

USFWS STATUS: None.

MONTANA STATUS: Watch list.

GLOBAL AND STATE RANK: G4G5/S1

GLOBAL DISTRIBUTION: AK to Newfoundland, south to GA, MO, WY, UT, ID and OR, absent in the Great Plains. Sparsely distributed in Montana.

MONTANA COUNTIES: Flathead, Lewis & Clark, Lincoln, Missoula.

PHYSIOGRAPHIC DISTRIBUTION: Upper Flathead River drainage, Tobacco River drainage.

NATIONAL FOREST(S): Flathead, Helena, Kootenai; possibly occurring on Lewis & Clark, Lolo.

HABITAT: Shallow, fresh water and boggy margins of ponds, lakes, and sloughs in the valley, foothill, and montane zones, 880-1800 m (2,900-5,900 ft).

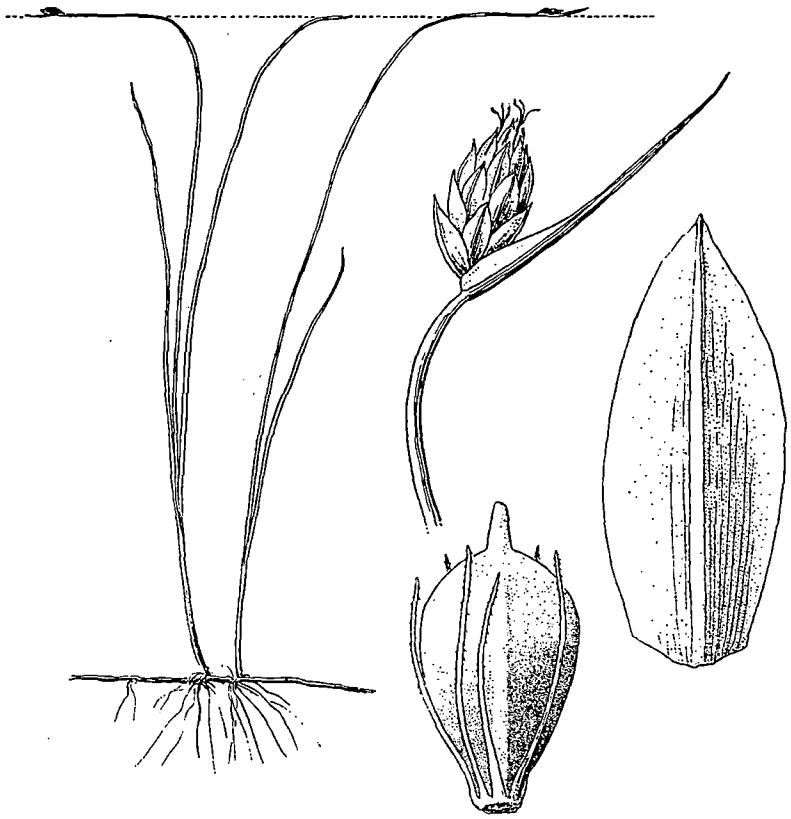
DESCRIPTION: Rhizomatous perennial with slender, weak stems 20-80 cm (8-30 in) long that float on the water's surface rather than emerge above it. Leaves are long and flaccid and arise mainly from near the base of the plant. The inflorescence consists of a solitary spike subtended by a green, leaf-like bract, 1-6 cm (0.5-2.5 in) long, that is held nearly erect and appears to be a continuation of the stem. The light brown spike is composed of numerous, membranous scales, each subtending a flower consisting of 3 stamens and an ovary with 6 slender bristles arising from the base. Ovary matures into a three-sided achene (seed) that is 2-4 mm long. Flowering from late June through July, mature fruit in August.

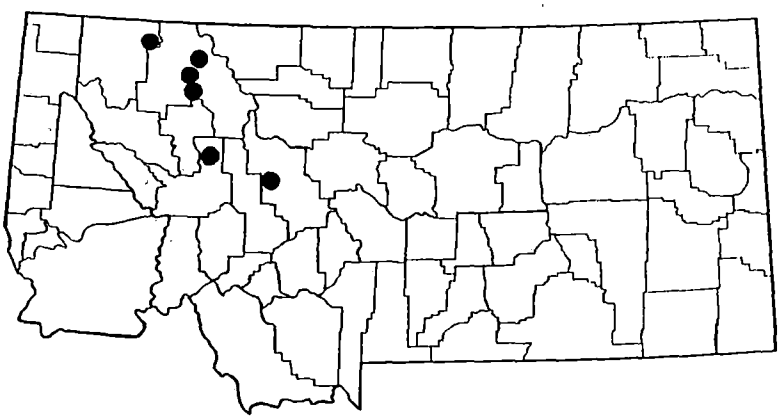
The flaccid stems and aquatic habit distinguish this species from all other Scirpus in our area.

COMMENTS: This species occurs in scattered locations throughout northwest Montana and may be more common than records indicate. The population from Glacier National Park has not been relocated.

12/89

SCIRPUS SUBTERMINALIS





SILENE SPALDINGII Wats.
Spalding's Catchfly

FAMILY: Caryophyllaceae (Pink Family)

SYNONYMS: None.

USFS REGION 1 STATUS: MT - WATCH; N. ID - WATCH.

USFWS STATUS: C2.

MONTANA STATUS: Threatened.

GLOBAL AND STATE RANK: G2/S1

GLOBAL DISTRIBUTION: Southeast WA, northeast OR, northern ID, and northwest MT. Regional endemic.

MONTANA COUNTIES: Flathead, Lake, Lincoln, Sanders.

PHYSIOGRAPHIC DISTRIBUTION: Upper Flathead River drainage, Tobacco Valley.

NATIONAL FOREST(S): Possibly occurring on Flathead, Kootenai, Lolo.

HABITAT: Wheatgrass-fescue grassland in the valley and foothill zones, 820-1010 m (2,700-3,300 ft).

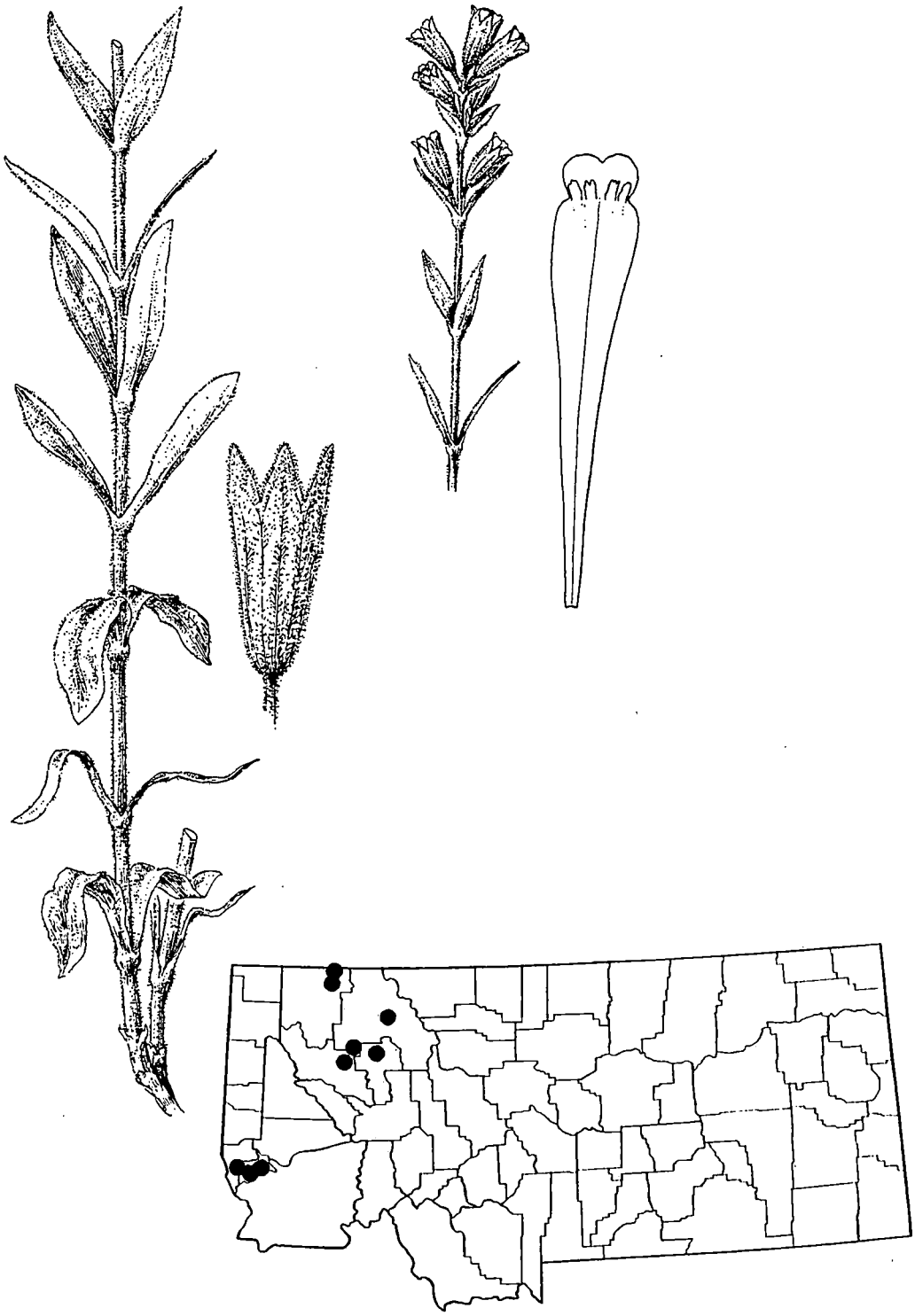
DESCRIPTION: Perennial with a simple or branched rootcrown and stems up to 45 cm (18 in) tall. There are 4-7 pairs of sessile, broadly lance-shaped leaves, 6-7 cm (2-3 in) long below and gradually reduced in size upward. Herbage is long-hairy and very sticky. There are few-many flowers in a leafy, somewhat open inflorescence. The tubular calyx, ca. 15 mm long, has 10 nerves on the surface and is very sticky. The flowers have 5 separate, white petals, each composed of a narrow claw ca. 15 mm long, expanding into a broadened blade above. Only the entire or shallowly lobed blade with 4 tiny wings at the base protrudes beyond the mouth of the calyx. Fruit is a capsule, 10-15 mm long, filled with numerous tiny seeds. Flowering in July.

Spalding's catchfly can be distinguished from other perennial Silene by the very sticky foliage and petals that are entire or only shallowly lobed.

COMMENTS: Most Montana populations of this species are small and are threatened by livestock grazing and agricultural and residential development. The Flathead County population has not been relocated and is presumed extinct.

12/89

SILENE SPALDINGII



SYNTHYRIS CANBYI Pennell
Mission Mountain Kittentails

FAMILY: Scrophulariaceae (Figwort Family)

SYNONYMS: None.

USFS REGION 1 STATUS: MT - WATCH.

USFWS STATUS: 3C.

MONTANA STATUS: Limited Distribution.

GLOBAL AND STATE RANK: G2G3/S2S3

GLOBAL DISTRIBUTION: Northwest MT; state endemic.

MONTANA COUNTIES: Lake, Missoula.

PHYSIOGRAPHIC DISTRIBUTION: Mission Range, Swan Range.

NATIONAL FOREST(S): Flathead, Lolo.

HABITAT: Open, rocky, usually calcareous soil of talus slopes and windswept ridgetops in subalpine and alpine zones, 2290-2900 m (7,500-9,500 ft).

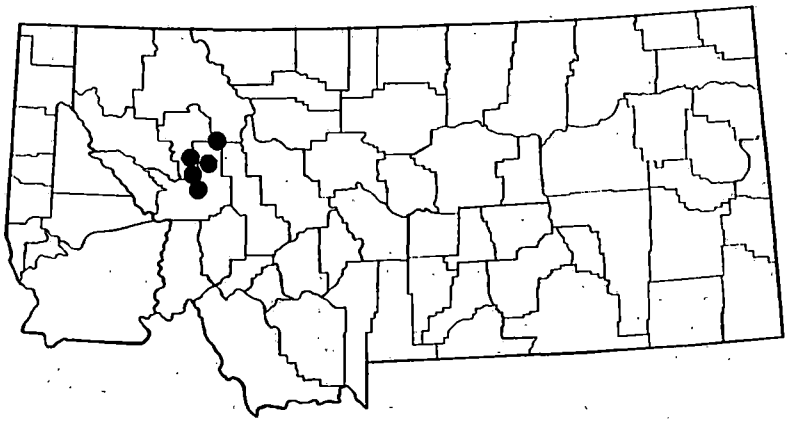
DESCRIPTION: Rhizomatous perennial with erect stems up to 10 cm (4 in) long that are surpassed by the leaves. Basal leaves have petioles 5-9 cm (2-4 in) long and spade-shaped blades, 2-3 cm long, that are both sharply toothed and cleft nearly half way to the midvein. Foliage is very lightly hairy or hairless. The flowers are borne in a dense, globose inflorescence that elongates greatly in fruit. The purple, four-lobed flowers are 5-7 mm long and have two stamens well exserted beyond the mouth. Flattened seed capsules are 5-7 mm long and covered with hair. Flowering from late June through early August.

The deeply incised, spade-shaped leaves separate this species from other members of Synthyris and the closely related Besseya in our area.

COMMENTS: This Montana endemic is locally common in the Mission Range. Specimens from the Jocko Mtns. appear intermediate between S. canbyi and S. pinnatifida.

12/89

SYNTHYRIS CANBYI



THLASPI PARVIFLORUM A. Nels.
Small-flowered Pennycress

FAMILY: Brassicaceae (Mustard Family)

SYNONYMS: None.

USFS REGION 1 STATUS: MT - WATCH.

USFWS STATUS: None.

MONTANA STATUS: Sensitive.

GLOBAL AND STATE RANK: G3/S1

GLOBAL DISTRIBUTION: Central ID, northwest WY, and southwest MT.

MONTANA COUNTIES: Beaverhead, Park.

PHYSIOGRAPHIC DISTRIBUTION: Beartooth Mtns., Beaverhead River drainage.

NATIONAL FOREST(S): Custer; possibly occurring on Beaverhead, Deerlodge, Gallatin.

HABITAT: Moist to dry meadows and limestone cliffs in the montane zone, 2280-2440 m (7,500-8,000 ft).

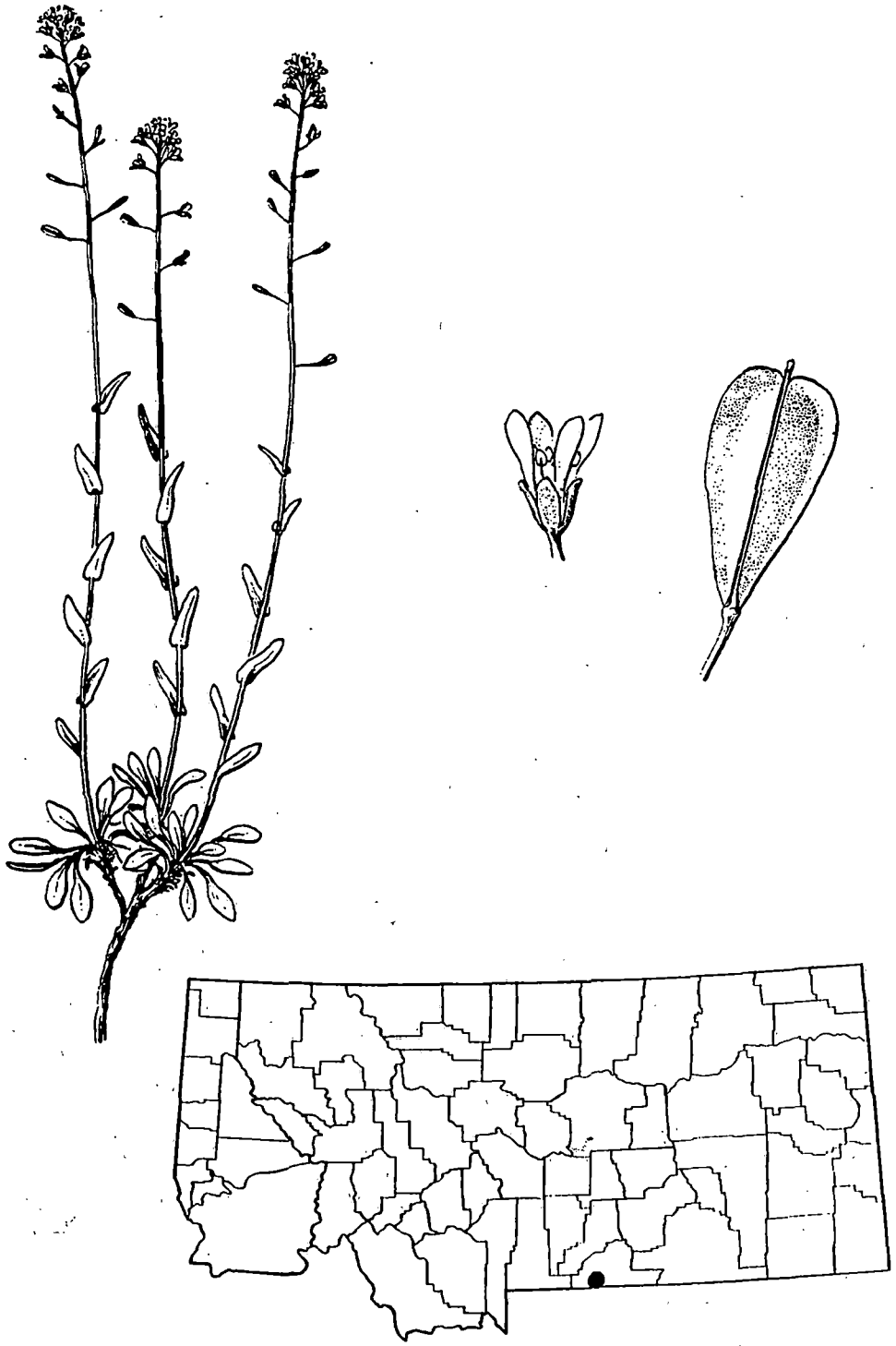
DESCRIPTION: Hairless perennial with 1-many simple or branched stems, 3-25 cm (1-10 in) tall, from basal rosettes arising from a simple or branched rootcrown. Basal leaves are narrowly spoon-shaped and 1-4 cm long, with entire or few-toothed margins and a petiole 1/2-twice as long as the blade. The few-several clasping stem leaves are lance-shaped to narrowly elliptic and 5-35 mm long. Flowers are borne on spreading stalks, 4-10 mm long, in a narrow inflorescence that is congested at first but elongates with age. The four sepals are 1-2 mm long, and the four separate, white petals are 2-4 mm long. Fruit is teardrop-shaped, 4-10 mm long, keeled on the margins, and very shallowly lobed at the top with the style protruding less than 1 mm from between the lobes. Flowering and fruiting in June and July.

This species can be distinguished from the similar and more common T. fendleri by the smaller flowers and shorter style.

COMMENTS: The Beaverhead County collection does not have specific location data; consequently, there is only one known site for this species in Montana.

12/89

THLASPI PARVIFLORUM



TRIFOLIUM ERIOCEPHALUM Nutt. var. PIPERI Martin
Woolly-head Clover

FAMILY: Fabaceae (Pea Family)

SYNONYMS: Trifolium eriocephalum ssp. arcuatum (Piper) J. Gillett.

USFS REGION 1 STATUS: MT - WATCH.

USFWS STATUS: None.

MONTANA STATUS: Sensitive.

GLOBAL AND STATE RANK: G4T3/S1

GLOBAL DISTRIBUTION: Blue Mtns. of southeast WA to Harney Co., OR, and adjacent ID, east to southwest MT.

MONTANA COUNTIES: Ravalli.

PHYSIOGRAPHIC DISTRIBUTION: Foothills in the Bitterroot Valley.

NATIONAL FOREST(S): Bitterroot; possibly occurring on Beaverhead, Lolo.

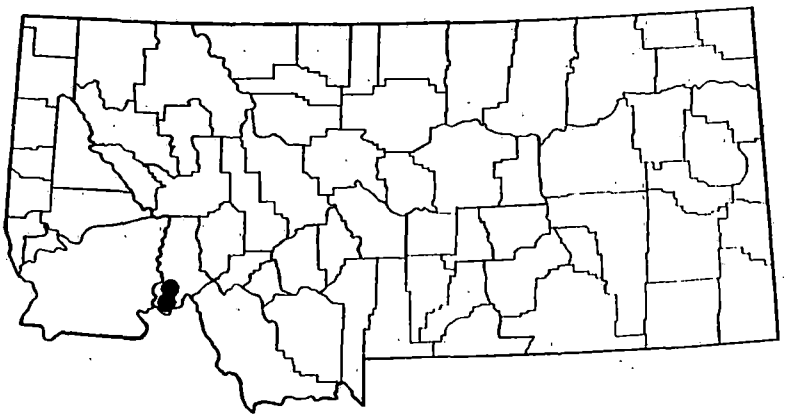
HABITAT: Drier meadows and woods at lower elevations, 1460-1585 m (4,800-5,200 ft).

DESCRIPTION: Native perennial with erect stems 20-60 cm (8-24 in) tall from a thick taproot and a branched rootcrown. Leaves have three leaflets, 2-7 cm (1-3 in) long, that are elliptic to oblong with sharply toothed margins. The base of each leaf petiole is enlarged to form two lance-shaped wings (stipules) 2-5 cm (1-2 in) long. Foliage is sparsely to densely long-hairy. Twenty-five to 80 flowers are borne in globe-shaped clusters at the ends of the main stem or side branches. Pinkish to red flowers are nodding and 12-17 mm long, with a hood-shaped upper petal (banner), two narrow, separate petals on the side (wings), and the two lower ones united into a boat-shaped petal (keel). The calyx has five long teeth at the mouth and is covered with long, feather-like hairs. Fruit is a small pod with 4 ovules. Flowering in May and June.

There are many species of clover in Montana, and a technical key should be consulted for positive identification. This species can be distinguished from other perennial Trifolium occurring at lower elevations by the combination of its erect, leafy habit, lack of a leafy involucre below the inflorescence, and long feathery hairs on the calyx teeth.

12/89

TRIFOLIUM ERIOCEPHALUM var. PIPERI



TRIFOLIUM GYMNOCARPON Nutt.
Hollyleaf Clover

FAMILY: Fabaceae (Pea Family)

SYNONYMS: Trifolium subcaulescens Gray; T. plummerae Wats.; T. nemorale Greene.

USFS REGION 1 STATUS: MT - WATCH.

USFWS STATUS: None.

MONTANA STATUS: Sensitive.

GLOBAL AND STATE RANK: G4/S1

GLOBAL DISTRIBUTION: Northeastern OR south to northeastern CA, AZ, and NM, east to MT.

MONTANA COUNTIES: Ravalli.

PHYSIOGRAPHIC DISTRIBUTION: Bitterroot Mtns.

NATIONAL FOREST(S): Bitterroot; possibly occurring on Beaverhead, Lolo.

HABITAT: Open woods and slopes, usually in dry soil of sagebrush desert to ponderosa pine forest, 1525-1645 m (5,000-5,400 ft).

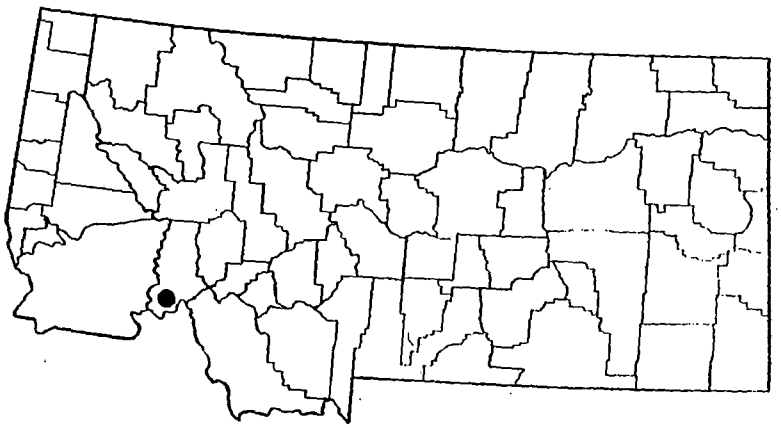
DESCRIPTION: Perennial forming clumps with many stems ca. 15 cm (6 in) high, from a branched rootcrown and stout taproot. Leaves arise from the base of the stems and have membranous appendages 5-15 mm long at the base that remain as shreds on the rootcrown. Each leaf has three ovate leaflets, 5-20 mm long, with sharply toothed margins. Herbage is sparsely covered with straight, appressed hairs. Three to 15 spreading or nodding flowers are borne in loose clusters at the ends of peduncles that are usually shorter than the leaves. Light yellow to flesh-colored flowers are 8-14 mm long, with a hood-shaped upper petal (banner), two narrow, separate petals on the side (wings), and the two lower ones united into a boat-shaped petal (keel). The densely long-hairy calyx is 1/3 to 1/2 as long as the corolla and is tubular at the base, but forms 5 long, triangular teeth at the mouth. The small fruit pod usually has a single seed. Flowering mid-May through July.

This is our only tufted clover without leafy stems that occurs below the subalpine zone.

COMMENTS: This species occurs peripherally in southwestern Montana.

12/89

TRIFOLIUM GYMNOCARPON



TRISETUM ORTHOCHAETUM Hitchc.
Bitterroot Trisetum

FAMILY: Poaceae (Grass Family)

SYNONYMS: None.

USFS REGION 1 STATUS: MT - WATCH.

USFWS STATUS: C2.

MONTANA STATUS: Undetermined.

GLOBAL AND STATE RANK: HYB

GLOBAL DISTRIBUTION: Known only from Missoula County, MT.

MONTANA COUNTIES: Missoula.

PHYSIOGRAPHIC DISTRIBUTION: Bitterroot Mtns.

NATIONAL FOREST(S): Lolo; possibly occurring on Bitterroot.

HABITAT: Margins of montane moist meadows, often in the ecotone with adjacent coniferous forests, 1360-1375 m (4,460-4,510 ft).

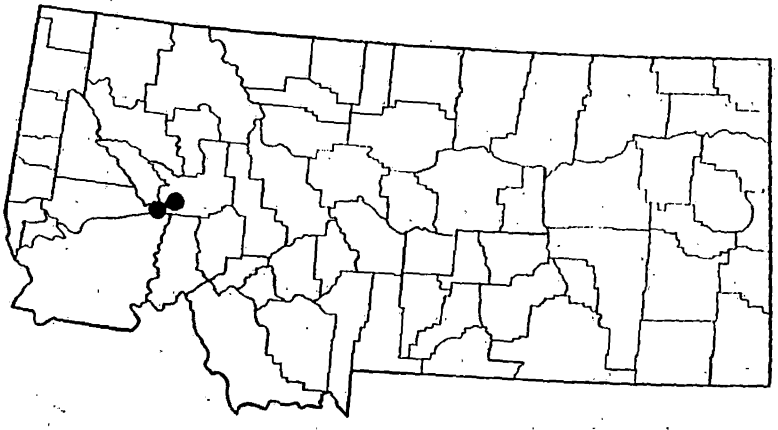
DESCRIPTION: Slender, perennial grass forming small clumps with stems up to ca. 110 cm (43 in) tall. Leaves are flat and 4-7 mm wide. Foliage is hairless. The spikelets are borne on erect branchlets in a loose, sometimes nodding inflorescence. Each spikelet consists of two glumes at the base and three flowers, each with an ovary and stamens enclosed in a lemma and palea. The two glumes are sharp-pointed and ca. 6 mm long. Lemmas are ca. 6 mm long and notched at the tip, with a straight or slightly bent awn, 5-6 mm long, arising from the back. Hairs at the base of the lemma are less than 1 mm long. This grass matures in July.

The grass family is a difficult group, and a technical key should be consulted for positive identification. This species can be told from others in the genus Trisetum by the presence of a nearly straight, rather than distinctly bent, awn on the lemmas.

COMMENTS: Both the morphological intermediacy of this plant (between T. canescens and T. wolfii), and the low percentage of viable seed produced (0-3%), support the theory that it is a hybrid between two species.

12/89

TRISETUM ORTHOCHAETUM



ZIZIA AUREA (L.) Koch
Golden Alexanders

FAMILY: Apiaceae (Parsley Family)

SYNONYMS: None.

USFS REGION 1 STATUS: MT - WATCH.

USFWS STATUS: None.

MONTANA STATUS: Undetermined.

GLOBAL AND STATE RANK: G5/SU

GLOBAL DISTRIBUTION: MT and Saskatchewan to eastern Canada, south to FL and TX.

MONTANA COUNTIES: Reported for Flathead.

PHYSIOGRAPHIC DISTRIBUTION: Unknown.

NATIONAL FOREST(S): Possibly occurring on Flathead.

HABITAT: Mesic grasslands, forest openings, and margins of streams and ponds.

DESCRIPTION: Perennial forb with branched stems, 40-80 cm (15-30 in) tall, from a cluster of fleshy roots. Lower leaves are twice divided into threes, with ultimate leaflets that are broadly lance-shaped, 25-50 mm long, and finely toothed on the margins. Upper leaves are once divided into three leaflets. The herbage is hairless or nearly so. Flowers are borne in flat-topped, umbrella-like inflorescences (umbels), 1-4 cm high, at the ends of the branches. Each flower has five inconspicuous sepals and five small bright yellow petals borne on top of the ovary. Ribbed fruits are narrowly elliptic and 2-4 mm long.

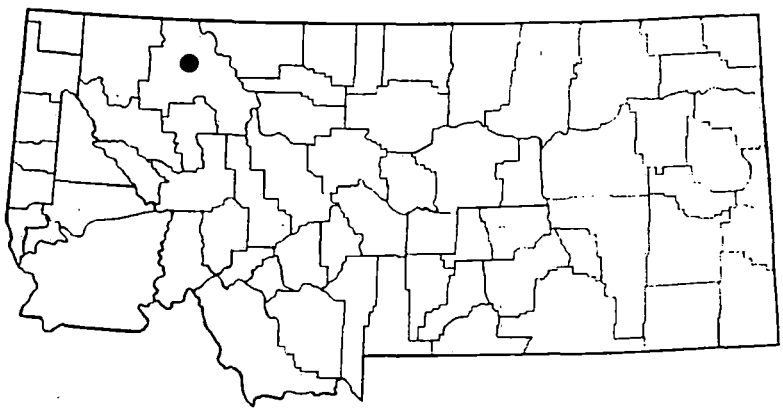
The twice-ternate leaves and yellow flowers distinguish this species from other members of the Parsley Family in our area.

COMMENTS: Reported for Montana by Mathias and Constance (1944) and for Flathead County by Dorn (1984).

12/89

ZIZIA AUREA

NO ILLUSTRATION AVAILABLE



REFERENCES

Barneby, R. C., 1964. Atlas of North American Astragalus. Memoirs New York Botanical Garden 13:1-1188.

Dorn, R. D. 1984. Vascular Plants of Montana. Mountain West Pub. Cheyenne, WY. 276 pp.

Hermann, F. J. 1970. Manual of the Carices of the Rocky Mountains and Colorado Basin. USDA-Forest Service Agric. Handbook No.374. 397 pp.

Hitchcock, C. L. and A. Cronquist. 1973. Flora of the Pacific Northwest. Univ. of Washington Press, Seattle. 730 pp.

Mathias, M. E. and L. Constance. 1944. North American Flora. New York Botanical Garden, New York.

Standley, L. A. 1985. Systematics of the Acutae group of Carex (Cyperaceae) in the Pacific Northwest. Systematic Botany Monographs 7:62-65.